



The Regional Municipality of York Police Services Board

To Make a Difference in Our Community

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February 16, 2024

Christopher Raynor
Regional Clerk
The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario, L3Y 6Z1

Dear Mr. Raynor:

Re: Improving First Responder Communications through Ontario's Building Code

At its meeting on January 24, 2024, the Regional Municipality of York Police Services Board received the attached joint report of the Executive Director and the Chief of Police entitled "Improving First Responder Communications through Ontario's Building Code" and adopted the following recommendations:

1. That the Board adopt the resolution in Attachment 2, advocating for changes to the Ontario Building Code.
2. That the Board authorize staff to make submissions to the Ministry of Municipal Affairs and Housing on behalf of the Board in response to the proposed changes outlined in this report.
3. That the Board authorize that this report and the resolution be forwarded to York Region Council, the local municipalities, the Minister of Municipal Affairs and Housing, the Solicitor General, Ontario Association of Police Services Boards, Ontario Association of Chiefs of Police, Police Association of Ontario, the Association of Municipalities of Ontario, and municipal and community safety partners and public safety stakeholders for support.

And further, that the resolution be amended; and the report and resolution be sent to the Building Industry and Land Development Association and include Chief Building Officers within lower-tier municipalities.

Therefore, on behalf of the Board, a copy of the Board report and corresponding appendices, are attached to the Amended Resolution for York Regional Council's endorsement.

Sincerely,

Anitra Basant Sisavang
Executive Director

/jk
/Attach. (2)

Copy to: Chief Jim MacSween, YRP

RESOLUTION
of
THE REGIONAL MUNICIPALITY OF YORK POLICE SERVICES BOARD

IMPROVING FIRST RESPONDER SAFETY THROUGH THE ONTARIO BUILDING CODE

WHEREAS The Regional Municipality of York Police Services Board (Board) is acutely aware and highly concerned by the challenges experienced by York Regional Police caused by the unreliability of in-building communications when attending locations in response to an emergency call;

AND WHEREAS the Board recognizes that the unreliability of in-building communication for first responders is a safety risk and could be improved through Ontario's Building Code;

AND WHEREAS the Ministry of Municipal Affairs and Housing has been undertaking the process of developing the next edition of the Ontario Building Code;

AND WHEREAS the Board has responded to the Ministry's Regulatory Proposal 23-MMAH020, respecting the Ontario Building Code review, with a submission proposing amendments that would improve the reliability of in-building communication for first responders;

AND WHEREAS the Board's submission, made on December 18, 2023 proposes to improve in-building communications through the inclusion of criteria to support improved Emergency Communications within Part 3 of Ontario Regulation 332/12 of the Ontario Building Code;

AND WHEREAS the inclusion of this proposed criteria on Emergency Communication would not only increase the reliability of in-building communications, but also improve first responder and community safety;

THEREFORE, BE IT RESOLVED THAT:

1. The Ministry of Municipal Affairs and Housing prioritize improving in-building communication for first responders as part of the Ontario Building Code Review.
2. The Ministry of Municipal Affairs and Housing support the inclusion of amendments, that would improve in-building communications for first responders, in the next edition of Ontario's Building Code.
3. This resolution be forwarded to the Minister of Municipal Affairs and Housing, the Solicitor General, the Regional Municipality of York, York Region Paramedic Services, all York Region Municipalities and their respective Fire Chiefs and Chief Building Officials, the Building Industry and Land Development Association, Ontario Association of Police Services Boards, Ontario Association of Chiefs of Police, Association of Municipalities of Ontario and the Public Sector Broadband Network Innovation Alliance for their support.



The Regional Municipality of York Police Services Board

Public Board Meeting
January 24, 2024
For Decision

Joint Report of the Executive Director and the Chief of Police

Improving First Responder Communications through Ontario's Building Code

1. Recommendations

1. That the Board adopt the resolution in Attachment 2, advocating for changes to the Ontario Building Code.
2. That the Board authorize staff to make submissions to the Ministry of Municipal Affairs and Housing on behalf of the Board in response to the proposed changes outlined in this report.
3. That the Board authorize that this report and the resolution be forwarded to York Region Council, the local municipalities, the Minister of Municipal Affairs and Housing, the Solicitor General, Ontario Association of Police Services Boards, Ontario Association of Chiefs of Police, Police Association of Ontario, the Association of Municipalities of Ontario, and municipal and community safety partners and public safety stakeholders for support.

2. Purpose

This report provides an update on the Board's submission in response to the Ministry of Municipal Affairs and Housing's call for comments on Ontario's Building Code and sets out next steps for the Board to advocate for the changes that would improve the reliability of in-building communications for first responders.

Key Points:

- Reliable in-building communications has been an increasing challenge for police services and other first responders in ensuring a rapid and effective response to calls for service.
- The Board identified an opportunity to improve safety for first responders through the Ontario Building Code.

- The Board desires to advocate for amendments to the life safety systems criteria within the Ontario Building Code that will lead to improvements in in-building communications for first responders.
- The Board is seeking the support of its municipal and community safety partners in these advocacy efforts that will support not just police services but all first responders across Ontario.
- The Board engage with the PSBN Innovation Alliance to support national efforts to improve first responder communications across Canada.

3. Background

The board has identified reliable in-building communications as a challenge to first responder safety that could be addressed through curated amendments to Ontario’s building code

On September 27, 2023, during a review of the police service budget, the Board raised questions regarding police service response in high-rise communities and asked how the Board could address any safety issues for emergency responders. ([See timestamp 46:09 – 50:47 of Board public session](#)).

Staff suggested that the Board could advocate for change through Ontario’s Building Code (Code). At its meeting on November 22, 2023, the Board received a [Memo on the Ontario and National Building Code Consultation and Review](#) and Proposal 23-MMAH020 from the Building and Development Branch of the Ministry of Municipal Affairs and Housing (Ministry). The Ministry requested submissions from interested partners as it undertakes the development process for the next edition of the Code, which is expected to be out by 2027.

The Ministry adopted the National Building Code’s process and criteria, which sets out several priorities which include:

- Code harmonization to reduce technical variations between construction codes across Canada.
- Alterations to existing buildings; to develop requirements for existing buildings to help guide energy efficiency improvements during renovations.
- Accessibility by expanding the application of the Accessibility objective and enhancing accessibility through improved safety.
- Select fire and life safety topics integrating the latest fire test research findings and addressing fire safety issues encountered during construction.
- Policy work to assess the role of the Codes in climate change adaptation, including flood-resistant design, mitigating against wildland-urban interface fires, extreme winds and consideration of clarifying the safety of emergency responders while performing their duties in code objectives.

A submission by the Board would be within the priority of Policy Work which includes consideration of clarifying the safety of emergency responders while performing their duties. In response to Proposal [23-MMAH020](#), staff submitted a response through Ontario's Regulatory Registry (see Attachment 1).

Board and York Regional Police (YRP) staff have reached out to the Ontario Association of Police Services Boards (OAPSB) and the Ontario Association of Chiefs of Police (OACP) to bring attention to this matter and seek their support of this advocacy effort. Further to this, staff continue to identify additional partners that may provide their support.

4. Analysis

RELIABLE COMMUNICATIONS

Reliable communication coverage supports a rapid and effective emergency response to protect the safety of both emergency responders and the public

The Public Safety Radio Network (Radio Network), used by emergency responders across Canada, consists of radio towers and supporting infrastructure systems. YRP's Radio Network infrastructure is strategically located across York Region to ensure 99.5 percent radio signal coverage at street level. This wide-area network provides consistent and reliable communications and is designed to be robust and resilient in the face of severe weather, utility power failures or other severe events which may impact commercial communication networks.

With the increase in high-rise building development, and the adoption of new and improved construction technologies and materials, the radio signals are not able to easily move through both new and improved building structures and densely built environments.

The loss of radio communications when first responders are actively responding to emerging situations places them at significant risk as they are out of reach of dispatch and may not have the ability to call for backup. When this occurs, locations are identified, on an ongoing basis, as a risk and are flagged as a hazard, requiring additional officers and resources to be deployed to the location. The additional officers attending these locations create operational inefficiencies as they are not available to respond to other calls. Having reliable in-building communications would alleviate this issue.

The locations that may be flagged as a hazard, as a result of the communication challenges, include both high-rise and low-rise structures, residential, commercial and industrial buildings, old and new builds, as well as public buildings such as hospitals, schools, community centres and administrative offices.

York Regional Police has been making use of the widely adopted mobile data technologies that augment communications capacity in areas beyond the radio network

The Board recently approved the purchase of Cellular Based Enhanced Radio Push-to-Talk software tools that will integrate with the existing YRP Radio Network and will provide stability for critical officer communication beyond coverage areas, where the Radio Network is diminished by the materials and density of a building structure or may not be available, such as during out-of-region deployment(s).

The Push-to-Talk software is used on Mobile Data Terminal Smartphones (MDT), an established technology that is widely used across various industries and public agencies. YRP has provided these tools to officers as they enable instant communication among first responders and augment the Radio Network by operating over regular cellular carrier networks. The software technology uses a secure private network managed by YRP, which preserves the integrity, security and confidentiality of response communication.

The adoption of a mix of technologies to enhance the reliability of first responder communications has become a widely adopted practice to ensure the delivery of adequate and effective policing

Other police agencies across Canada and the majority of the GTHA police services have taken a similar approach as YRP to enable officers in various capacities to provide Push-to-Talk radio access on their mobile cellular devices. It is an effective solution that diversifies the communications streams available to first responders. A key concern with this added technology is that it will only function where a cellular carrier network is available.

ENHANCING COVERAGE AND INCREASING SAFETY

In British Columbia's Lower Mainland, a set of codes, regulations and bylaws have been developed and implemented to address the reliability of first responder communications

In British Columbia, E-Comm 911, serving Metro Vancouver and parts of the Fraser Valley, has worked with cities and municipalities to develop a set of codes, regulations and by-laws to make radio enhancement equipment mandatory for buildings that meet a criteria for the size and type of building. These codes are built upon industry standards requiring developers and builders to include communication coverage as part of the life safety system for occupancy permits. Therefore, ensuring technical requirements and engineering considerations are met for first responders and for system integrators to have the processes and tools needed for application request, approval, and signoff of the radio enhancement projects. The systems are designed by qualified, competent, certified engineers using certified products and qualified installers. Processes for code adherence, inspection, and recertification are crucial to ensure compliance with this approach among builders, first responders and municipalities within British Columbia's Lower Mainland.

Nationally, the Public Safety Broadband Network Innovation Alliance (PIA) has been advocating for change across Canada that would use cellular networks to improve first responder communications

The PIA is a unique grass roots initiative that in less than five years has created a not-for-profit Public Safety Broadband Network (PSBN), using a cellular multi-network operator model that uses 4G/5G network communications built by and for public safety agencies in Canada.

The PSBN Innovation Alliance (PIA) is a Canadian organization that started in 2019 with just two founding agencies – the Halton Regional Police Service and Peel Regional Police Service. The PIA has grown to encompass over 70 members, including commercial partners, municipalities, airports, transit agencies, electric utilities, university R&D partners, tri-services public safety agencies and first responder associations such as the OACP and the Association of Municipalities of Ontario (AMO). Within York Region, YRP is a voting member of the PIA and the City of Vaughan and Town of Aurora are also represented.

Halton’s experience establishing a PSBN demonstrates the value of being able to access multiple communication networks to ensure first responders have reliable communications

As a founding member of the PIA, Halton Regional Police Service (Halton Police) established its own PSBN to fill the gaps where commercial cellular coverage was found to be unreliable or unavailable. These gaps were found to occur in both rural and urban areas. To further ensure communication continuity, Halton entered into roaming agreements with commercial cellular providers, which allows Halton Police to access commercial cellular networks where the PSBN is unavailable and extend the network coverage into buildings which incorporate in-building cellular enhancement systems. Since this deployment in 2018, the Halton Police PSBN is used over 98 percent of the time by Halton Police in the course of duty.

The PIA continues to work with cellular providers and is working towards signing new agreements with additional service providers to extend the roaming capabilities. The work of the PIA to establish network-sharing agreements are a fundamental element to enabling communication availability, redundancy and resiliency for first responders when they are crossing into areas where signal and reception from one provider becomes weak. When one network is unusable, and there is another provider’s network available, the communication equipment will roam onto the other network to maintain communications.

The work of the PIA focuses on increasing cellular coverage for emergency responders and is complementary to the Code advocacy efforts of the Board, which seeks to increase the reliability of in-building communications

The PIA, through their leadership would support the Board to endorse the resolution and submission letter for the requested changes to the Ontario Building Code as well as National Construction Codes as it benefits first responders and directly supports PIA’s fundamental organizational goals and objectives.

The Board may engage with municipal and community safety partners to support the efforts of the PIA's model and policy principles relating to reliable wireless 911 access and reliable multi-carrier roaming model. Collaborating with the PIA on initiatives would advance both provincial and national reforms that would enhance the reliability of first responder communications and improve both emergency response and public safety.

AMENDING THE CODE

Selective amendments to the Code would build upon the fire safety systems that are already included and incorporated in building practice

The proposed amendments to the Ontario Building Code are small as they build upon the existing requirements for life safety systems, which have supported fire services in their response to fire alarms. However, the incorporation of the proposed amendments requires significant attention to the operational aspects of communications systems.

Among the existing tools within the Code that support fire safety, there is an opportunity to work with fire services to inform these Code amendments and how they may be implemented and operationalized so that these amendments become standard operating procedure and building practice.

Police Services would be involved in the review, testing and administration of the communication systems

Chief Building Officials and Fire Chiefs are tasked with the administration, review and testing of life safety systems criteria within Ontario's Building Code. The implementation of the proposed Code changes would require the inclusion of police services in the review, testing and administration of the communication systems.

Police services may expect to be included in the pre-occupancy training and testing with the builders' trade and/or technical staff, as well as being involved in ongoing testing and upgrade activities.

The amendments to the Code would apply to new buildings, and there would be provisions for incorporating the improvements during retro-fits

The proposed amendments, if adopted and incorporated, would apply to new buildings; however, the challenges will still remain in existing buildings and will require provisions to allow for the gradual adoption of the amendments through renovation and retrofit activities by building owners.

5. Financial Considerations

The advocacy activities within this report do not have any direct financial implications for the Board or YRP.

6. Local Impact

A copy of this report and the resolution of the Board will be circulated to local municipalities for their support but is not expected to have a direct impact to the local municipalities.

7. Conclusion

The current Radio Network operates using specific radio frequencies which are diminished or made unavailable in building structures, particularly high-rise buildings and buildings that make use of improved materials and technologies to support energy efficiency.

YRP, as with many police services and first responders have been using a mix of technologies as part of their operations to mitigate the unreliability of in-building communications when responding to emergency calls. This technology mix ensures access to both secure radio and cellular communications but is reliant on the availability of one or both of those communications networks wherever they are called to respond.

Advocating for communications-specific amendments to Ontario's Building Code would ensure reliable in-building communications are available to first responders regardless of the availability of access to the Radio Network or cellular bandwidth.

Supporting the work of the PIA would complement the Board's own advocacy activities by bringing this issue forward and seeking national adoption of communication tools and standards that increase public safety by improving the reliability of first responder communications both in-building and in areas where coverage is currently unreliable.

YRP and Board staff will proceed with developing technical criteria that may be proposed for the amendments and will continue to facilitate the advocacy efforts of the Board by engaging with municipal and community safety partners and other interested stakeholders.

For more information on this report, please contact Anitra Basant Sisavang, Executive Director, at psb@yrp.ca. Alternative formats or communication supports are available upon request.

Approved for Submission: Jim MacSween, M.O.M., B.A.A.
Chief of Police

Approved for Submission: Anitra Basant Sisavang
Executive Director

Attachments (2)



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Ministry of Municipal Affairs and Housing

Response to: 23-MMAH020

December 18, 2023

RE: Consultation on the 2025 National Construction Codes (Nov-Dec 2023)

The Regional Municipality of York Police Service Board (YRPSB) wishes to propose additions to the Ontario Building Code that would address communications issues within built forms that have an impact on the efficacy of communication tools which are used by first responders while performing their duties in high-rise structures and other buildings.

BACKGROUND

At its meeting on September 27, 2023 the Board during its review of the 2024 York Regional Police Services Budget had raised questions regarding how the police service was serving populations within high-rise structures and asked how it could address any safety issues for emergency responders. ([See timestamp 46:09 – 50:47 of Board public session](#))

In the course of the discussion, it was found that the police service had encountered a challenge with maintaining communications while responding to emergency calls for service and over time had identified the height of structures and materials used within buildings impacted the stability of communications in the course of an emergency response.

Having reached out to other police and emergency services, this was found to be a common challenge and each service was choosing to address the issue in the course of their operations. The Board having identified that this challenge can not be resolved by way of operational response and equipment alone, see that there is an opportunity, through the Ontario Building Code, to implement specific code changes, for the Province of Ontario, that standardize the approach, to first responder communications stability, regardless of which emergency service is responding to an emergency call.

The Ministry of Municipal Affairs and Housing's (Ministry) use of the National Building Code's consultation process offers the Ministry the opportunity to engage with YRPSB and other public safety partners to effect impactful change, similar to what has been achieved through the inclusion of Fire Alarm System requirements in the Ontario Building Code.

YRPSB staff have identified that this submission would come under the National Building Codes 2025 priority of Policy Work which includes consideration of clarifying the safety of emergency responders while performing their duties in code objectives.

The YRPSB wishes to bring to the Ministry's attention that the issue identified in this proposal is not isolated to the Greater Toronto Area and have found that police services in other jurisdictions across Ontario, Canada and North America are trying to address the challenge of communication stability in various built forms.

PROPOSAL

The YRPSB proposes that a new section on Emergency Communications be added and would have a similar scope and criteria as established under [Ontario Regulation 332/12 Building Code](#) Part 3 – Fire Protection, Occupation Safety and Accessibility.

The YRPSB understands that there is a requirement for prescriptive criteria that can be applied to the built form.

More specifically YRPSB proposes these Emergency Communications provisions be modelled on the existing Sections 3.2.4.1 – 3.2.4.7, 3.2.6.1, 3.2.6.7 - 3.2.6.9, and 3.2.7.8 and is willing to propose prescriptive criteria that would set the requirements for stable communications for emergency responders under the following headings:

- Determination of Requirement for a Communications System
- Continuity of Communications System
- Types of Communications Systems
- Installation and Verification of Communications Systems
- Remote Alarm Monitoring – Alarms and Events
- Remote System Monitoring – Health and Performance
- Application for High Rise and certain other buildings
- Central Control Facility – Remote Monitoring
- Provision for Communication System
- Approved Equipment List
- Acceptance Criteria (Minimum Signal, Signal Coverage Areas)
- Testing
- Emergency Power

These communication systems are often referred to as Emergency Responders Communication Enhancement Systems (ERCES) or as Repeaters, BDAs, Signal

boosters etc. The technology deployed into the built form must benefit the emergency responders in the community in which they are working. As Ontario is a large and diverse area, each municipal emergency service may have different requirements.

To best enable future communications the new section proposed should allow options for commercial cellular, and also local jurisdiction options for local agency requirements to be satisfied.

New technology for emergency responders' communication systems and user equipment is continually changing. Companies are developing new products centred around commercial cellular radio communications systems, or privately operated networks and there exists the opportunity to incorporate code requirements that leverage the ability to make use of new technology as it evolves.

YRP is a member of the [Public Safety Broadband Network Innovation Alliance](#), which is working to design a Communication System Framework bringing the benefits of Multi-Carrier commercial cellular networks, as well as other networks through Open Use or Private 5G networks, into a unified network for emergency responders. The Public Safety Broadband Network Innovation Alliance is a national initiative but provinces have a critical role to play in this initiative for it to be effective.

REQUEST

Staff of York Regional Police Services Board and York Regional Police would like the opportunity to meet to discuss these proposed additions to the Ontario Building Code to ensure due consideration of this important matter for the betterment of first responder and community safety.

Anitra Basant Sisavang
Executive Director
York Regional Police Services Board

RESOLUTION
of
THE REGIONAL MUNICIPALITY OF YORK POLICE SERVICES BOARD

IMPROVING FIRST RESPONDER SAFETY THROUGH THE ONTARIO BUILDING CODE

WHEREAS The Regional Municipality of York Police Services Board (Board) has been made aware of challenges experienced by York Regional Police caused by the unreliability of in-building communications when attending locations in response to an emergency call;

AND WHEREAS the Board recognizes that the unreliability of in-building communication for first responders is a safety risk and could be improved through Ontario's Building Code;

AND WHEREAS the Ministry of Municipal Affairs and Housing has been undertaking the process of developing the next edition of the Ontario Building Code;

AND WHEREAS the Board has responded to the Ministry's Regulatory Proposal 23-MMAH020, respecting the Ontario Building Code review, with a submission proposing amendments that would improve the reliability of in-building communication for first responders;

AND WHEREAS the Board's submission, made on December 18, 2023 proposes to improve in-building communications through the inclusion of a section with criteria to support improved Emergency Communications within Part 3 of Ontario Regulation 332/12 of the Ontario Building Code;

AND WHEREAS the inclusion of this proposed section on Emergency Communication would not only increase the reliability of in-building communications, but also improve first responder and community safety;

THEREFORE, BE IT RESOLVED THAT:

1. The Ministry of Municipal Affairs and Housing prioritize improving in-building communication for first responders as part of the Ontario Building Code Review.
2. The Ministry of Municipal Affairs and Housing support the inclusion of amendments, that would improve in-building communications for first responders, in the next edition of Ontario's Building Code.