Prevention of Municipal – Railway Proximity Safety Issues through Effective Land Use Planning

A Submission to the Railway Safety Act Review Panel

September 22, 2017

FCM/RAC Proximity Initiative
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Introduction

The Federation of Canadian Municipalities (FCM) – Railway Association of Canada (RAC) Proximity Initiative members believe that our model of collaboration demonstrates that municipalities, railways and the federal government can work together to improve rail safety. The *FCM-RAC Guidelines for New Development in Proximity to Railway Operations* demonstrate how we can build better today to avoid proximity safety issues inherent when urban development and railways are in close proximity. The push to intensify urban development to avoid urban sprawl has led to increased development on lands in close proximity to rail operations and has sometimes resulted in encroachment on railway property. These new developments include the conversions of industrial or commercial properties to residential ones, sometimes built without any mitigation measures and sited next to major railway corridors. This absence of mitigation measures creates serious safety and quality of life issues for residents due to the lack of crash walls, noise and vibration mitigation and proper separation barriers to prevent trespassing. When proximity issues arising from the growth and expansion of rail facilities or communities are not understood and addressed, problems can often be intractable and long lasting. This review provides an important opportunity to discuss these issues and their significance as we plan and look ahead at transportation policy in Canada. The FCM-RAC Proximity Initiative appreciates the opportunity to provide this submission to the *Railway Safety Act* Review Panel.

Background History

The Federation of Canadian Municipalities (FCM) and the Railway Association of Canada (RAC) are committed to building a common approach to the prevention and resolution of issues that may arise when people live and work in close proximity to railway operations. There are railways lines in service in over 2000 municipalities across Canada.

Building on back-to-back memorandums of understanding (MOU) since 2003, both organizations continue to work together with their most recent open-ended MOU signed in September 2016. The FCM–RAC Proximity Initiative Steering Committee was established in 2003, with equal representation from the FCM (elected officials) and RAC (senior railway representatives) and includes observers from Transport Canada and the Canadian Transportation Agency (CTA).

The three main goals of the original MOU were to: build awareness, establish guidelines and develop dispute resolution protocols and processes. In 2016, the MOU was reviewed and updated to include guidance for engaging with Provincial Governments (see Appendix 1).
Accomplishments to date include developing a dispute resolution model that is included in the *CTA Guidelines for the Resolution of Complaints over Railway Noise and Vibration*, and developing and publishing Proximity Guidelines and Best Practices in 2004. These initial guidelines were reviewed, edited and revised to include conversion and infill projects and launched in May 2013 at the FCM Annual Conference as the *Guidelines for New Development in Proximity to Railway Operations*.\(^1\)

**Proximity Issues**

Most of Canada’s municipalities have evolved around railway lines and the services they deliver to the community. While rail operations in communities have been mutually beneficial, their proximity can sometimes lead to issues between people and trains.

Canadians are living and working around trains and their lines. They are also opting to leave their car at home in favour of commuting by train. Commuter rail carries about 77 million passengers per year\(^2\) and that number is on the rise. But as Canada becomes more urbanized and cities try to minimize urban sprawl, many new residential developments are being built on sites in close proximity to rail facilities in both urban and rural communities, creating challenges for these communities and railways to co-exist. Both parties' goals are the same. Railways and communities both want to reduce pollution, congestion and costs while prioritizing safety and convenience.

As with any other transport mode’s infrastructure (e.g. airports, truck depots), rail facilities are located all across the country and operate 24/7, often in the proximity of highly populated communities. As Canada becomes increasingly urbanized, railroads and people are living closer together as development grows around rail facilities. People living and working near these facilities (such as rail tracks or yards) can be impacted by noise and vibration from train operations. This may include train whistling, wheel squeal, idling of locomotives, and shunting of cars in yards. In addition, the construction and maintenance of rail infrastructure such as rail bridges, signals, track and buildings can further complicate noise and vibration issues. Construction and maintenance related to highway-railway crossings can be disruptive to public convenience. Railways try to minimize the adverse effects of their operations on people living nearby through initiatives such as track greasing and equipping locomotives with anti-idling devices.

The issue of safety is also sometimes not fully considered in new development projects in proximity to existing railway operations. This includes the danger of train derailments impacting

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\(^1\) [http://www.proximityissues.ca](http://www.proximityissues.ca)

homes and lives, the construction of new grade crossings, and adjacent land uses that create trespassing issues across railways. The safety issues noted in the 2007 Rail Safety Act Review’s final report continue today:

“We are convinced from our consultations that there is a need to improve and formalize the communication between municipal jurisdictions and the railways on the safety implications of land use and road access near railway properties. Roles and responsibilities should be clarified and recognized. Municipalities and land-owners, including the railways, should engage in robust consultation during the design and planning stages for land use and non-railway works near railway lines. Municipalities should ensure that access roads for new subdivisions are built to existing public crossings, and they should take responsibility for the crossings during the development phase. The costs for the ongoing maintenance of the crossings should also be considered in planning. Municipalities might need to require developers to absorb the costs of crossing upgrades to accommodate new land uses.”³

FCM-RAC Guidelines for New Development in Proximity to Railway Operations

The FCM-RAC Proximity Initiative developed the revised Guidelines for New Development in Proximity to Railway Operations (Guidelines) in May 2013 which built upon an earlier version of Best Practices and Guidelines issued in 2003. These new Guidelines are intended to assist municipal governments and railways in reviewing and determining general planning policies when developing on lands in proximity to railway facilities, as well as to establish a process for making site-specific recommendations and decisions to reduce land-use incompatibilities for developments in proximity to railway operations, addressing such issues as safety, noise and vibration. A key component is a model review process for new residential development, infill, and conversions in proximity to railways. Adoption of these guidelines into municipal land use regulations can provide greater assurance that our communities of the future are safe and sustainable.

The desire to ensure safety and promote a high quality of life for people living and working in close proximity to railway corridors is a principle objective of the Guidelines. Mitigation in the form of a standard setback and berm or crash wall are measures that have been developed by the railways based on a detailed analysis of past incidents and derailments.

![Diagram of standard mitigation for a new residential development in proximity to a main line railway. Source: FCM-RAC Guidelines for New Development in Proximity to Railway Operations, P.19.](image)

**Greenfield Developments**

Standard mitigation (Figure 1) measures serve as a minimum requirement to reduce incompatibility issues associated with locating new development in proximity to railway corridors. These measures are most easily implemented in new greenfield developments.

Figure 1 - Standard mitigation for a new residential development in proximity to a main line railway. Source: FCM-RAC Guidelines for New Development in Proximity to Railway Operations, P.19.
The setback contributes to the mitigation against potential impact of railway incidents as well as noise and vibration through distance separation. The earthen berm in conjunction with the setback can protect against the physical components of a derailment and provides mitigation of wheel and rail noise. It also reduces the overall noise barrier height and cost, and offers a productive use of foundation excavations.

Infill and Conversions

Today we often see conversion and infill projects in urban areas that are located next to railway corridors without crash walls or site-specific mitigation measures leading to more noise, vibration and safety issues for municipalities and railways.

Conversions and infill developments (Figure 2) are a good way to intensify and bring residents back to city centres, but these constructions must address safety, noise, vibration and other proximity issues. Many of the adverse impacts of railway noise can be avoided or minimized through good design practices and safety issues and can be addressed through the incorporation of crash walls.

In an infill or conversion development, the noise sensitive rooms, such as bedrooms, should be located on the “quiet side” of the building. Building on a podium and locating the gym or garage spaces on these ground floors – moves the residents further from the noise and vibration source and provides an additional safety setback. The Guidelines also provide a Development Viability Assessment process for identifying alternative solutions where the standard measures are not workable.

The intent of the Guidelines is to:
• Promote awareness around the safety, noise and vibration issues and mitigation measures associated with development near railway operations;
• Establish effective approvals processes for new residential development, infill and conversions from industrial or commercial uses that allows municipal planners to effectively evaluate such proposals while ensuring that appropriate safety, noise and vibration mitigation measures are included; and
• Promote greater consistency in the application of relevant standards across the country.

Guidelines Adoption

There is a need in Canada for planning systems that more effectively anticipate and manage proximity issues, and better facilitate municipal and railway growth. Good planning supports effective transportation systems and addresses safety issues. However, approaches for dealing with land-use decisions involving developments in proximity to railways vary greatly at the municipal level.

The FCM-RAC Proximity Initiative has an annual outreach program to promote the Guidelines through presentations and participation at conferences across Canada, including municipal associations, urban planning associations, urban planning schools, industry associations, municipal councils, local government associations, provincial municipal associations, transportation associations, development and real-estate groups and provincial land use ministries.

The Agglomeration of Montreal that includes the City of Montreal and the fifteen independent cities on the Island of Montreal was the first major urban area to adopt the Guidelines into its land use plan in January 2015.4 Ten other major cities are reviewing the Guidelines and more than 175 other municipalities have adopted, or are using, the Guidelines in their permitting process.

Provincial Legislation

While there is increased interest and activity by municipalities in adopting the Guidelines, having provincial governments adopt the Guidelines into their provincial land use acts, and ultimately municipal land-use plans, would ensure consistency in safety and livability across the country. This would provide a framework to effectively anticipate and manage proximity issues, and to better facilitate municipal and railway growth.

4 Schéma d’aménagement et de développement de l’agglomération de Montréal, Chapitre 4 – Le document complémentaire, 4.8.3.
Currently the Government of Saskatchewan, Ministry of Government Relations, Community Planning, are reviewing input from stakeholders (members of the Proximity Government Relations Committee attended) regarding amendments to The Planning and Development Act, 2007 (PDA). The Ministry consulted on five planning and development-related themes that included planning in proximity to railway operations. It is anticipated that the new legislation will be enacted by May 2018, but it is not known if the final changes will include any zoning or land use changes with regards to setbacks or mitigation measures for proximity issues.

The Province of Ontario has enacted legislation and developed guidelines with regards to land use planning and rail–municipal proximity management. The Proximity Initiative participated in both the review of the Provincial Policy Statement (PPS) in 2013 and the creation of the Freight Supportive Guidelines in 2014. As a result of this engagement, the Ontario Ministry of Municipal Affairs and Housing have included many aspects of the Guidelines in their PPS that became effective on April 30, 2014. Under the Planning Act, municipalities must revise and update their official plan every five years to ensure that it conforms to provincial plans and is consistent with the PPS: “All municipal official plans and decisions affecting a planning matter in Ontario are required to be consistent with the policies set out in the PPS. The PPS provides policy direction on matters of provincial interest related to land use planning and development, including providing specific direction on freight-supportive land use patterns, protection of major-goods movement facilities and corridors and planning in vicinity of major facilities.”

The Ontario Ministry of Transportation’s Freight Supportive Guidelines are intended to “help municipalities, planners, engineers, developers and other practitioners create safe and efficient freight-supportive communities. By coordinating land use planning and freight mobility planning, the Guidelines help to respond to industry needs for freight movement in Ontario, as well as provide linkages between freight movement and land use planning policy and practice.” The Freight Supportive Guidelines are intended to complement and be in accordance with the existing provincial policy framework by providing strategies, information and knowledge to assist municipalities in implementing freight-supportive policies in their official plans.

Regulations under Ontario’s Planning Act also require railways to be notified of official plans (and amendments), subdivision plans, zoning bylaws and consents to sever lands, if the proposal involves any land within 300 metres of a railway line. This allows the railways to

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7 Ibid P3
review proposed developments and submit recommendations regarding incompatibility or safety issues. Disputes can be brought to the Ontario Municipal Board for adjudication.  

New Brunswick has also adopted a similar notification process in their subdivision bylaws under Bill 45, an Act Respecting Local Governance and Community Planning (May 5, 2017). This will come into effect on January 1, 2018. While we are pleased with this decision, it is important to note that it only applies to new sub-divisions and is not binding.

While notification processes open a dialog between the municipality and railway, they are not binding and in the case of Ontario and the Ontario Municipal Board, arbitration process can be lengthy and costly for both municipalities and railways. In New Brunswick, the railways are to be given a time limit of two weeks to file an objection and the development officer can approve the subdivision even if an objection is received.

The Proximity Initiative continues to promote the adoption of the FCM-RAC Guidelines for New Development in Proximity to Railway Operations, but there is a need for federal leadership to ensure setbacks and other mitigation measures for safety are in place for all new developments and redevelopment projects.

**Canadian Transportation Agency Decision 69-R-2014**

The Canada Transportation Act authorizes the Canadian Transportation Agency (the Agency) to resolve complaints about noise or vibration related to construction or operations by federal freight railways and public passenger service providers including urban transit authorities.

The Agency cited the Proximity Initiative’s first Guidelines and Best Practices (2004) in Decision No. 69-R-2014 in February 2014. The noise and vibration complaint was from a resident of Vaudreuil-Dorion, Quebec. The complaint was dismissed based on the following determination:

> [55] The Agency notes that despite the close proximity to the busy main line track, no evidence was presented that the residential developer assessed the impacts of the railway noise and vibration on the residential development. No evidence was presented that the developer incorporated mitigation measures in the construction of the house to lessen the exposure to noise and vibration.\(^{10}\)

> [56] Furthermore, beyond a post facto municipal council resolution expressing concern about noise and vibration and affirming that the Municipality aims to ensure that its

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citizens get the best possible quality of life, there is no evidence before the Agency indicating that when approvals were sought for the housing development, any consideration was given by the Municipality to issues of noise and vibration or to the proximity of residences to CP’s main line, notwithstanding the Federation of Canadian Municipalities and Railway Association of Canada’s Proximity Guidelines and Best Practices, which pre-date the Municipality’s decision to approve the construction and of which the Municipality should have been aware.¹¹

57] A Municipality takes a risk when deciding to allow housing development in close proximity to a railway right of way and the Agency is of the opinion that Municipalities have a responsibility to assess compatibility issues before approving a housing development along a railway right of way, and if they approve a development, to ensure that the necessary mitigation measures are implemented. The Agency notes that the Municipality apparently authorized the residential construction along CP’s main east-west rail transportation corridor. However, there was no evidence presented to the Agency of any mitigation measures having been implemented. In fact, CP draws attention to the fact that no berm or noise wall was constructed.¹²

The Proximity Initiative was pleased that the Agency recognized the important contribution of the Guidelines in reducing proximity issues. This decision also illustrates that the fundamental question of developments in close proximity to railway facilities remains unregulated and is perpetuated as a result of the absence of a regulatory framework.


The Proximity Initiative provided a submission during the Railway Safety Act Review (2007) and a presentation (Proximity Management & Community Outreach in Canada) in July 2007. Issues described in *Stronger Ties: A Shared Commitment to Railway Safety – Review of the Railway Safety Act, November 2007* continues today: “The issue of new development near railways is a multi-jurisdictional challenge, since land-use planning and development is both a provincial and a municipal responsibility, while the major railways and their rights-of-way are federally regulated. There are no consistent consultation protocols or land-use appeal mechanisms across the country, and provincial and municipal land zoning and permit procedures vary widely.”¹³

¹¹ Ibid

¹² Ibid

The Railway Safety Review Panel, in its final report responded to that concern by noting that: “We are also aware that railway safety depends on good collaboration among many stakeholders with different interests, including those at all levels of government, public and private sector organizations, and the public. This became particularly apparent when issues that are foremost in the public’s mind, such as those involving proximity of railways to communities, and environmental concerns, were brought to our attention.”\(^\text{14}\)

The Panel issued Recommendation 34: “The Railway Safety Act should be amended to require the developer and municipalities to engage in a process of consultation with railway companies prior to any decision respecting land use that may affect railway safety.”\(^\text{15}\)

No actions resulted from Recommendation 34 and as earlier stated, the same proximity issues involving safety continue today.

**Transport Canada Land Use Role**

Under Canada’s Constitution, provincial governments have authority over land use planning. However, there are limited exceptions. But in matters of safety Transport Canada has jurisdiction which has been used to impose restrictions in land use with regards to airports (aerodromes)

“From a regulatory perspective, the authority for the designation of and control of the use of lands located outside of aerodrome property rests with provincial/municipal levels of government. The only exception to this fact, in the aviation case, occurs where an airport zoning regulation, made pursuant to the Aeronautics Act, is in force.

*The Minister of Transport may exercise authority only over lands that are included in an Airport Zoning Regulation made pursuant to the Act. An Airport Zoning Regulation contains restrictive clauses that describe the activities and uses that are restricted or prohibited and contains a legal description of the lands to which it applies.*

*Restrictions and or prohibitions contained in a zoning regulation may range from limiting the height of structures to prohibiting specified land uses or to prohibiting facilities that may interfere with signals or communications to/from aircraft.*\(^\text{16}\)

There are too many municipalities in Canada that would be impacted (over 2000) to have a similar zoning regulation under the *Railway Safety Act* but the above does demonstrate that

\(^{14}\) Ibid, P.8  
\(^{15}\) Ibid, P.107  
\(^{16}\) Aeronautics Act (R.S., 1985, c. A-2)
Transport Canada has previously played a role in regulating land use to protect the safety of the public and property.

**Recommendations for Improving Rail-Municipal Safety Issues in Canada**

There is a need for a more comprehensive approach across Canada that appropriately considers and creates a land use framework for new developments in proximity to railway operations that includes setbacks and mitigation measures to ensure safety. The FCM-RAC Proximity Initiative is recommending that the RSA Review Panel includes the following in their final report:

- A recommendation to urge the federal government to work closely with its provincial counterparts to advance land use planning best practices in proximity to railway operations, that would include adopting mandatory setbacks and/or crash walls or other site-specific measures per the *Guidelines for New Development in Proximity to Railway Operations* by municipalities and provincial governments, and support provincial efforts to develop a notification to railways process that is aligned with provincial land use regulations.

- A recommendation to amend the Railway Safety Act to require road authorities to first consider alternatives to creating new grade crossings, including upgrading and improving safety at existing crossings and grade-separated crossings, before constructing a new grade crossing.

- A recommendation that the federal government ensure that new crossings or existing public or private crossings are upgraded to meet the current and future safety needs of the local community, and that federal funding for safety improvements to crossings, including possible grade separations and closures, is in place.

In conclusion, the FCM-RAC Proximity Initiative is committed to continuing to collaborate with municipalities, railways and the federal government to improve rail safety through the promotion of the *FCM-RAC Guidelines for New Development in Proximity to Railway Operations*. However, there is a need for federal leadership to ensure that there is consistency in safety for all new developments in proximity to rail.
MEMORANDUM OF UNDERSTANDING
Between
The Federation of Canadian Municipalities
And
The Railway Association of Canada

1. Introduction

Residential development near railway rights of way and facilities, together with expanding railway operations designed to meet increased demand for the movement of goods and people have affected the environment where people and railways co-exist. Increasing frequency of railway-community proximity issues have resulted.

Because residential development and railway operations are often incompatible, such situations must be fully understood by all parties so that all potential solutions are identified and assessed. The Proximity Initiative recognizes that different solutions are needed for greenfield developments and for infill/conversion sites where standard mitigation measures are not feasible.

To assist in avoiding future proximity problems, the Federation of Canadian Municipalities (FCM) and the Railway Association of Canada (RAC) recognize that it is in everyone's interest to negotiate appropriate relationships between railways and communities, to plan ahead and resolve problems before they occur, and to develop mechanisms for resolving unanticipated problems.

To enable better communication and understanding, FCM and RAC have developed a FCM-RAC Proximity Initiative and Steering Committee. It is intended to help the Canadian public and officials from government and industry increase their awareness of emerging proximity issues and provide direction on their successful resolution.

2. Accountable Parties

To ensure a consistent industry-wide approach to proximity issues, the Railway Association of Canada (RAC), representing railways in Canada, and the Federation of Canadian Municipalities (FCM), representing Canada's municipal governments, (the Parties) hereby enter into this Memorandum of Understanding (MOU).

Others may become party to the MOU with the consent of RAC and FCM, but RAC and FCM shall remain jointly responsible for the MOU, and all matters and decisions taken hereunder.

3. Mandate

Under this MOU, the Parties will jointly work through the FCM-RAC Proximity Initiative Steering Committee to develop and implement a strategy to reduce misunderstanding and avoid unnecessary conflict arising from railway-community proximity.

The parties have identified specific areas for action. These areas include:
• Improving awareness among stakeholders in the railway, municipal, provincial and development sectors regarding the need for effective railway/community proximity planning and management.

• Developing and continually updating proximity guidelines for new developments in proximity to railway operations, offering direction from the planning phase through construction and residency.

• Developing evaluation criteria and benchmarks for the local dispute resolution framework used by parties when railway-community proximity issues emerge.

Joint RAC-FCM advocacy on regulatory and legislative issues will be limited to raising awareness of the guidelines among government stakeholders and providing technical advice and support to the accountable parties. The parties agree that advocacy on emerging federal policy and legislative issues will be undertaken independently through their respective organizations.

The parties intend to consult potentially affected organizations and individuals to achieve this mandate.

4. Framework

Proximity Initiative

The mandate of the MOU:

- Awareness and communications
- Proximity guideline development
- Dispute resolution protocols (completed)

Resources and Funding

• Implementation and management of initiatives, programs, and projects generated through this MOU may involve third-party contracts and agreements. Financial and human resource cost estimates, including cost sharing arrangements, for major initiatives must be approved by the RAC Policy and Advocacy Committee and/or the RAC Board of Directors, and the FCM Standing Committee on Municipal Infrastructure and Transportation Policy, and the FCM Executive Committee or National Board of Directors prior to implementation.

• Costs related to participation in the Proximity Initiative activities will be the responsibility of each representative’s employer.

Governance

• The Proximity Initiative reports to RAC Board of Directors through the RAC’s Policy and Advocacy Committee and to FCM’s National Board of Directors through the Standing Committee on Municipal Infrastructure and Transportation Policy. The Steering Committee representatives will conduct affairs related to the MOU on behalf of the RAC and FCM committees.

• The Steering Committee will defer to the FCM and the RAC for approval of funding and resource allocations as well as key communications planning and strategy issues.
Engagement with local or regional municipalities

- The Project Manager and Guidelines Committee will provide technical advice and operational support to municipal staff requesting assistance with the development and implementation of proximity guidelines in their communities.

- FCM will provide strategic support at the political level and with senior municipal officials, in particular members of FCM’s Big City Mayor’s Caucus, to raise awareness and promote the adoption of proximity guidelines, in coordination with the Project Manager and Guidelines Committee’s interactions with municipal staff.

Engagement with provincial governments

- A Proximity Government Relations Committee will encourage and foster provincial legislation as it relates to land use planning in proximity to railway operations, so as to promote the safety and sustainability of both communities and railways. The Government Relations Committee will include representatives from railways, FCM and provincial-territorial municipal associations.

- FCM will liaise with provincial-territorial municipal associations to provide strategic support at the provincial political level, and seek support from senior municipal officials from major municipalities in any given province.

5. Terms

This Memorandum of Understanding shall be effective for an open-ended term from the date of signing. Every two years, a review shall be undertaken and completed within sixty (60) days, evaluating the functioning and achievements of the Steering Committee and its subcommittees and setting out any remaining railway/community proximity issues and challenges.

The terms contained within the MOU should be reviewed and confirmed by the Parties. Should modifications to these terms be required, the Parties must agree in writing.

Should either party wish to terminate its participation in the MOU, the party must advise the other in writing and provide ninety (90) days notice. During this notice period the parties will attempt to find an alternative course of action for meeting the objectives of this MOU.
Clark Somerville  
President  
Federation of Canadian Municipalities  
Signed in Ottawa on: September 16, 2016

Michael Bourque  
President and CEO  
Railway Association of Canada  
Signed in Ottawa on: August 3, 2016

Brock Carlton  
Chief Executive Officer  
Federation of Canadian Municipalities  
Signed in Ottawa on: August 30, 2016