



Vegetation Maintenance Requirements

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Preface

This is the second edition of the Vegetation Maintenance Requirements (RC-0104-05). It is an updated version which provides current information on Metrolinx policies and procedures in regard to hazardous vegetation maintenance along Metrolinx right-of-way. Some examples include dead/ dying trees or trees at risk of falling on Metrolinx land or adjacent properties, brush cutting for operational sightlines, ballast vegetation control, and toxic species. This updated standard also defines responsibilities for Metrolinx and adjacent property owners and provides direction on the processes and procedures regarding vegetation maintenance which were not previously included in the standard.

This standard is directed at various Metrolinx units, with an interest in the maintenance of rail corridor, and provides a better understanding of how Track Maintenance Delivery prioritizes their vegetation maintenance and what responsibilities lie on adjacent property owners.

Suggestions for changes to this standard can be sent to Metrolinx Track Engineering Office, Attention: Director of Track Engineering, who will introduce the proposed changes to Metrolinx. The Director of Track Engineering ultimately authorizes the changes. A description of the proposed changes needs to be included along with information on the background of the application and any other useful rationale or justification. The proposal for changes to the standard to also include your name, company affiliation (if applicable), e-mail address, and phone number.

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1. Scope

1.1 Overview

- 1.1.1 One of the key cornerstones of the Metrolinx Customer Service Strategy is a commitment to always take safety seriously. To ensure the safety of our operations, our employees, and the public, Metrolinx has implemented an extensive vegetation maintenance program across its heavy rail network.
- 1.1.2 This standard outlines Metrolinx's commitment to working collaboratively with communities and stakeholders to ensure our vegetation management activities are in balance with our environmental obligations.

1.2 Purpose

- 1.2.1 The key objective of this standard is to describe the Track Maintenance Delivery, Track Infrastructure's commitment to vegetation management along the heavy rail corridor by establishing requirements to uphold our vegetation maintenance requirements.
- 1.2.2 This document describes Metrolinx' vegetation maintenance plan for all heavy rail corridors owned and maintained by Metrolinx and does not include maintenance responsibilities of stations, bus, facilities, public facing structures.
- 1.2.3 The Vegetation Maintenance Requirements Document identifies the following:
- a) Vegetation management priorities;
 - b) Approaches to vegetation management; and
 - c) Approaches to tree management issues.

2. Definitions, abbreviations, interpretation, codes and standards

2.1 Definitions

2.1.1 Capitalized terms used in this standard shall have the meanings prescribed in Table 1.

Table 1: List of definitions

Term	Definition
"Contracted Party"	Means the party responsible for the performance of the Work of the project assignment and under contract or agreement with Metrolinx (e.g. Consultant, Contractor, Designer, Design-Builder, Project Co, Technical Advisor, or Developer).
"Metrolinx"	Means Metrolinx, a non-share capital corporation continued under the <i>Metrolinx Act</i> , S.O. 2006, c.16 and a Crown Agency in accordance with the <i>Crown Agency Act</i> , R.S.O. 1990, c.48 and includes all operating divisions.
"Metrolinx Track Maintenance Delivery"	Means the division within Metrolinx that is accountable for the performance of operations and maintenance services for Metrolinx Rail Corridors.
"Metrolinx Standards"	Means standards developed by Metrolinx.
"Metrolinx Track Infrastructure"	Means the division within Metrolinx that is accountable for the performance of operations and maintenance services for Metrolinx track.
"Rail Corridor(s)"	Means each of the Union Station, Lakeshore East, Lakeshore West, Milton, Barrie, Kitchener, Richmond Hill, and Stouffville rail corridors.
"Rail Corridor Access and Control"	Means the division within Metrolinx that manages entry onto one or more of the rail corridors and permits Contractors to enter, occupy, or perform Work as set out in a Rail Corridor Access Permit.
"Rail Operations"	Means all activities associated with the day-to-day operations of a railway.
"Rail Infrastructure"	Means all the structures, assets, buildings, land, and equipment that support the rail lines.
"Rail Traffic Control"	Means the Metrolinx department responsible for the smooth delivery of rail service.
"Claims & Insurance Department"	Means the group within Metrolinx that manages the claims process.

Term	Definition
"Transport Canada Standards"	Means the rules used to carry out the intent of statutes (Acts) enacted by the Parliament of Canada.
"Workblock"	Work Area designated for maintenance works

2.2 Abbreviations

2.2.1 The abbreviations used in this standard shall have the meaning prescribed in Table 2.

Table 2: List of abbreviations

Abbreviation	Definition
MX	Means "Metrolinx"
RAMP	Means "Rail Adhesion Management Program"
RCAC	Means "Rail Corridor Access and Control"
RTC	Means "Rail Traffic Control"
IVM	Means "Integrated Vegetation Management"

2.3 Codes and standards

2.3.1 All systems, equipment and materials required for Work relating to this standard, shall be provided in accordance with the most current edition of applicable federal, provincial, municipal, and industry codes, standards, and guidelines including:

- a) Metrolinx/GO Transit standards and guidelines (the "Metrolinx Standards") including:
 - 1) all latest version document on the GO Site including amendments and bulletins (http://www.gosite.ca/engineering_public/); and
 - 2) Metrolinx Grade Crossing Design Standards.
- b) Transport Canada Standards.

3. Approaches to Vegetation Management

3.1 Vegetation Management Priorities

3.1.1 Metrolinx shall prioritize its vegetation management duties as follows:

- a) Emergent
 - 1) Fallen trees;
 - 2) Dead or dying trees identified as a risk to rail operations or rail infrastructure;
 - 3) Removal of vegetation growth that may prevent access to maintenance infrastructure or pose a fire hazard or risk of damage to railway infrastructure equipment and electrification infrastructure equipment; and
 - 4) Other vegetation safety concerns as identified and/or approved by Metrolinx.
- b) Sightlines

Removal of grass, brush, trees, or any other vegetation that may restrict train operating sightlines or crossing sightlines as per Transport Canada Standards.
- c) Track Systems

Annual herbicide treatment of the ballast is conducted to ensure our certified track specialists can properly assess the condition of various track components and equipment as well as maintain rail integrity.
- d) Rail Head Leaf Mitigation

Removal and management of selected deciduous trees and canopy overhanging and within the railway corridor to reduce leaf volume and address rail adhesion related issues.
- e) Toxic Species

Removal and management of toxic species that pose a hazard to the health and safety of Metrolinx contractors, employees, and the general public. Examples of these include poison ivy (*Toxicodendron radicans*) and giant hogweed (*Heracleum mantegazzianum*). All other species such as invasive species which are not deemed to pose a safety risk within our rail corridor will not be managed by Metrolinx.

3.1.2 Vegetation growing outside of the rail system/ballast to the Metrolinx property line will not be managed outside of the above noted priorities. As such, typical

landscaping activities such as grass cutting, weed treatment, tree pruning, etc. will not be undertaken in these areas. This approach encourages the growth of native species of trees and shrubs and provides habitat for animals and other species.

3.2 Selective Control of Vegetation

3.2.1 Metrolinx' vegetation management program has been developed to manage and support all vegetation concerns that may compromise the safety of our rail operations, while also ensuring the protection of our employees, contractors, and the general public as well as maintaining our environmental obligations. Selective control of vegetation within the rail right-of-way is routinely managed.

3.2.1.1 Sightline Requirements

Metrolinx will manage any vegetation within the right of way accordingly in order to ensure adequate train operating sightlines as well as crossing sightlines as per Transport Canada Standards. Various sightline requirements include:

- a) Sightline maintenance for clear visibility for train crew operations;
- b) Visibility of railway signals and signs;
- c) Sightlines at curves; and
- d) Sightlines at road and pedestrian crossings to reduce the potential for vehicular and pedestrian accidents.

3.2.1.2 Risks to Rail Operations and Rail Infrastructure

3.2.1.2.1 Metrolinx shall inspect any vegetation growth that may pose a risk to rail operations or rail infrastructure. Annual vegetation surveys shall be conducted to identify any dead or dying trees at risk of falling onto Metrolinx corridors or adjacent properties and are prioritized accordingly.

3.2.1.2.2 Metrolinx shall also perform the management of selected deciduous trees and canopy overhanging and within the railway corridors through our Rail Adhesion Management Program (RAMP) to reduce leaf volume and address rail adhesion related issues.

3.2.1.3 Fire Hazards

Metrolinx shall seek to reduce any potential fire hazards to railway infrastructure equipment through ongoing brush cutting maintenance and further vegetation control methods. Any tree branches or limbs that are overhanging powerlines or communication wires located within the rail right-of-way will be maintained accordingly.

3.2.1.4 Vegetation Impacting Railway Worker Safety

Metrolinx will perform the ongoing management of toxic species that pose a hazard to the health and safety of Metrolinx contractors, employees, and the general public. Examples of these include poison ivy (*Toxicodendrom radicans*) and giant hogweed (*Heracleum mantegazzianum*). All other species such as invasive species which are not deemed to pose a safety risk within our rail corridor will not be managed by Metrolinx.

3.2.1.5 Maintenance of our Track System and Corridors

3.2.1.5.1 Metrolinx shall perform an annual ballast spraying program in order to control any undesirable vegetation growth within the ballast section which may negatively impact the structural integrity of the railroad bed and reduce the ability for proper drainage.

3.2.1.5.2 Vegetation maintenance per this section:

- a) Ensures proper drainage of the ballast section to avoid flooding or washout of the track structure and corrosion of the rail system.
- b) Ensures our certified track specialists can effectively inspect the condition of various track components and equipment as well as maintain the integrity of the rail.
- c) Reduces any possible hazards to employees and maintenance providers who are required to safely walk in the area for inspections or carry out maintenance duties such as rail and tie change outs.

3.2.1.6 Use of Herbicides

3.2.1.6.1 The use of herbicides is generally limited to track and ballast areas (approximately 2.44 m (8 ft) from centre line of track in either direction) where it is impractical to use other methods.

3.2.1.6.2 Based on the chemical mixture used, no entry within the limits is allowed for 12 hours after the end of the Workblock with the exception of work being performed at least 2.44 m (8 ft) from the centreline of the nearest track sprayed. This is subject to change based on the chemicals approved for use.

3.2.1.6.3 All herbicides are applied by authorized and licensed applicators in accordance with federal and provincial regulations and the manufacturer's recommendations. A copy of their licence proving that they are qualified to administer product shall be submitted with the work methodology plan to Metrolinx for review.

3.2.1.6.4 The contractor is also required to keep apprised of the technological advances in equipment and herbicide treatment levels for the purpose of reducing the amount of herbicide used, for instance utilizing weed seeker technology.

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- 3.2.1.6.5 Metrolinx contractors will make every effort not to spray when the public is observed near the application area.
 - 3.2.1.7 Communication Protocols
 - 3.2.1.7.1 Prior to the commencement of the ballast spraying program(s), the Corridor Maintenance group and Rail Corridor Access Control (RCAC) team will be notified of the upcoming work and provided with a tentative schedule. A system notice will be prepared by the Metrolinx project team and submitted to the Metrolinx Rail Traffic Control team for distribution.
 - 3.2.1.7.2 Track Maintenance Delivery shall notify Metrolinx Environmental Programs and Assessments and Community Relations in regard to any tree removals that are not considered urgent i.e., boundary trees that require removal for the securement of the rail corridor.
 - 3.2.1.7.3 Track Maintenance Delivery shall coordinate with adjacent property owners when boundary trees require removal for the installation of new fencing.
 - 3.2.1.7.4 A kick-off meeting will be held with various stakeholders at least two weeks prior to the commencement of work.
 - 3.2.1.7.5 Ongoing coordination will be maintained between the Metrolinx project team, the contractor performing the work, and the Rail Corridor Access Control (RCAC) group through Workblock request approvals, daily progress reports, and daily calls.
 - 3.2.1.7.6 Daily summary of previous Workblock completed and mileages sprayed/avoided shall be submitted to Track Maintenance Delivery; any issues to be detailed on the daily summary.
 - 3.2.1.7.7 Daily projected schedule to be sent out to include previous completed works, weather forecast, and schedule for the next 24 hours. Also included will be the remaining tentative schedule for upcoming weeks.
 - 3.2.1.7.8 Upon completion of the program, a program summary will be distributed, and future tentative dates will be provided.
 - 3.2.1.8 Drainage systems

Metrolinx shall remove vegetation from ditches and from inlets and outlets of all drainage structures on Metrolinx right-of-way in order to ensure that positive drainage is maintained, and the flow of water is not hindered. Note that short grass or similar low-height vegetation is acceptable. Drainage systems shall be regularly inspected and cleaned.

3.3 Approach to Tree Management Issues

- 3.3.1 Metrolinx shall manage trees within its property limits.
- 3.3.1.1 Trees growing within the railway corridor (i.e. between the railway boundary fences) are the responsibility of Metrolinx.
- 3.3.1.2 Trees growing on adjacent lands are the responsibility of the adjoining landowner. Adjacent property owners have the right and responsibility to maintain vegetation on their property, or vegetation from Metrolinx property which overhangs onto theirs so that they do not cause a danger or a nuisance and to mitigate any potential risk.
- 3.3.2 Provincially certified arborists shall be used for all tree limb trimming and tree removal operations. Metrolinx does not provide any vegetation maintenance or removal on City or privately owned property.
- 3.3.3 If required, Metrolinx or its contractor shall contact adjacent landowners to request and/or coordinate the felling or pruning of any tree which is causing concern, and/or advise the landowner of Metrolinx initiated pruning activities on trees overhanging or leaning over the railway corridor.
- 3.3.4 Conversely, adjacent landowners shall contact Metrolinx to request and or/coordinate the felling or pruning of any tree on Metrolinx managed property which is causing concern. If an adjoining landowner or occupier fails to take responsibility for their trees Metrolinx may initiate a claim for damages, restoration and legal costs as further described below.
- 3.3.5 Steps to follow if a tree falls from Metrolinx property onto an adjacent property:
- a) Property owner shall reach out to MX Customer Relations Department.
 - b) MX Customer Relations Department to contact Metrolinx Track Maintenance Delivery and Metrolinx Claims & Insurance Department shall inform of the incident.
 - c) Metrolinx Track Maintenance Delivery determines cause of the fallen tree.
 - 1) If determined to be from an unforeseen cause (wind/rainstorm):
 - (A) Any portion of the tree which falls on the adjacent property is the responsibility of the property owner to remove at their expense or in coordination with their home insurance provider, if desired.
 - (B) Metrolinx to coordinate the removal of the portion of the fallen tree which sits over onto MX property line at Metrolinx' expense.
 - (C) Any property damage to the adjacent owners' assets (i.e. fencing or other structure) shall be the responsibility of the adjacent owner at their expense or in coordination with their home insurance provider, if desired.

- 2) If determined to be dead/dying:
 - (A) Property owner shall coordinate the removal of the portion of the fallen tree which sits over the property line at their expense and submit a claim for reimbursement through Metrolinx Claims & Insurance Department.
 - (B) Any portion of the tree which remains on the Metrolinx property is the responsibility of Metrolinx to remove at their expense.
 - (C) Any property damage to the adjacent owners' assets (i.e. fencing or other structure) shall be the responsibility of the adjacent owner at their expense and submit a claim for reimbursement through MX Claims & Insurance Department.
- 3.3.5.2 In the event a tree on an adjacent property is inaccessible, Metrolinx can be contacted to assist with providing adequate protection for a hired contractor/arborist to remove safely.
- 3.3.5.3 In the event the fallen tree originated from a Metrolinx station facility, Station Operations shall assist in facilitating the request through the appropriate channels.
- 3.3.6 Steps to follow if a tree falls from an adjacent property onto Metrolinx property:
- a) Property owner shall reach out to MX Customer Relations Department.
 - b) MX Customer Relations Dept to contact MX Metrolinx Track Maintenance Delivery and Claims & Insurance Department shall inform of the incident.
 - c) Adjacent property owner shall obtain an Ontario certified arborist to determine the cause of the fallen tree.
- 1) If determined to be from an unforeseen cause (wind/rainstorm):
 - (A) Metrolinx shall coordinate the removal of the portion of the fallen tree which sits over onto MX property line. Any associated costs for this removal shall be covered by Metrolinx.
 - (B) Any portion of the tree which remains on the adjacent property is the responsibility of the property owner to remove at their expense, if desired.
 - (C) Any property damage to any MX owned assets shall be the responsibility of MX.
 - (D) Any property damage to property owner assets (fencing or other structures) shall be the responsibility of the property owner.
 - 2) If determined to be dead/dying:
 - (A) Metrolinx shall coordinate the removal of the portion of the fallen tree which sits over onto MX property line.

- (B) Any portion of the tree which remains on the adjacent property is the responsibility of the property owner to remove at their expense, if desired.
- (C) Any property damage to any MX owned assets (i.e. fencing or other structure) will be repaired by Metrolinx at the expense of the adjacent property owner.

3.3.7 Steps to follow if tree removal/tree trimming interferes with hydro or utility wires:

- a) Property owner shall reach out to MX Customer Relations Department.
- b) MX Customer Relations to reach out to Track Maintenance Delivery.
 - 1) If the line is determined to be on Metrolinx property, Track Maintenance Delivery will assess the condition of the tree.
 - (A) Is the tree dead, dying, or structurally weak? or
 - (B) Is the tree a safety hazard with the potential to cause an electrical safety concern to the public or deemed a potential fire hazard? or
 - (C) If the vegetation is deemed to be unsafe, Metrolinx will take the precautionary measures by hiring a qualified certified arborist to safely trim or remove the tree.
 - 2) If the line is on private property:

Resident shall contact applicable communications company to have the vegetation assessed and safely removed if applicable.
 - 3) No party outside of Metrolinx shall attempt to prune or cut down a tree near power lines. A tree falling into a power line can cause serious injury or death. A situation like this shall be immediately reported to the appropriate establishment that has authority over the respective utility line.

3.3.8 Tree Removal Clean Up

- 3.3.8.1 Trees trimmed or removed will be mulched/chipped or cut into 6 to 8-foot sections (if larger than 9" in diameter) and left safely on Metrolinx property to naturally decompose, away from the active rail right of way and ensuring they do not pose a flooding hazard.

4. Conclusion

- 4.1.1 This Metrolinx Vegetation Maintenance Requirements standard serves to provide a safe train operation and continued service while protecting railway infrastructure, employees, and members of the public.