



MUNICIPALITÉ DE

LAC-TREMBLANT-NORD

CONSTRUCTION GUIDE

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TREE PROTECTION ON CONSTRUCTION SITES

- In order to preserve the environment and the trees on our territory, it is **essential that the trees and their roots be protected**;
- A tree has two types of roots; woody roots and non-woody roots:
 - a) Woody roots :
 - Play a stabilizing role and anchors the tree to the ground;
 - Store food reserves.
 - b) Non-woody roots :
 - Mostly present in the first 40 centimeters of depth, these are feeder roots;
 - Like sponges, they capture water, minerals and oxygen from the soil.
- Any deposit and fill under the crown of a tree compact the soil, resulting in the roots being crushed;
- If you need to modify the level of your land, please respect a protection zone around the tree where there shall be no soil movement at all.

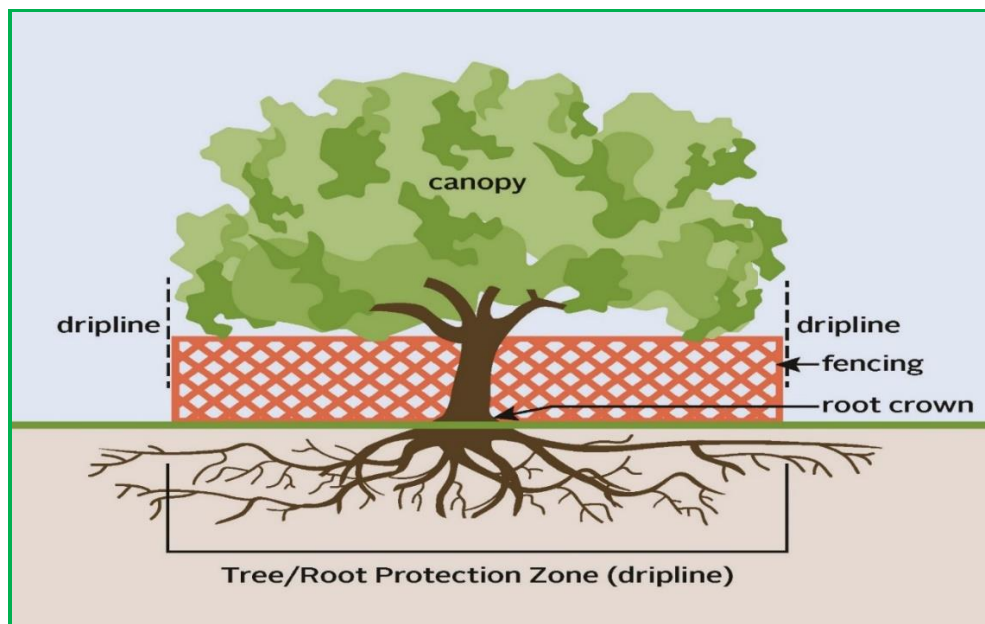
PREVENTIVE MEASURES TO IMPLEMENT

- 1) Place a protective fence within the protective perimeter around the tree, i.e., 2 m outside the diameter of the tree crown;
- 2) Avoid any drastic cutting or clearing;
- 3) Protect the tree from dust, smoke and high temperatures caused by fires, as well as gases from volatile toxic products;
- 4) Avoid any pollution of the soil by noxious materials or products;
- 5) Prohibit all traffic at the foot of the trees;
- 6) Do not modify the structure and nature of the soil without the advice of a specialist;
- 7) Do not hit the trunk or damage branches while using arms and shovels of mechanical equipment;
- 8) Avoid any deposit of materials, even temporary, within the perimeter of the roots;
- 9) Prohibit root cutting; and
- 10) Do not alter soil water conditions. In extreme cases, compensate with frequent watering.

EXAMPLES : EFFECTIVE PROTECTION MEASURES



Source : Microsoft Bing images



EROSION CONTROL

- **Before starting any work, it is essential to have an erosion and sediment control plan, especially for work near a lake or a watercourse.**

An erosion and sediment control plan will allow you to save time and money (corrective measures being more expensive and laborious) in addition to avoiding potential notices of infractions from the municipality.

In order to proceed, please consider:

- 1) Soil types;
- 2) Topography;
- 3) Maximum preservation of existing vegetation;
- 4) Weather during the intervention period and;
- 5) Water flow on site (natural drainage).

CONTROL MEASURES

- Sediment control measures are varied and include, but are not limited to, sedimentation basins and sediment barriers;
- To be effective, these measures must be properly installed and maintained. Also, it is sometimes necessary to use a combination of methods to discharge accumulated sediment.

In addition to these measures, it is important to :

1. Minimize the amount of area being devegetated;
2. Design site access to avoid rutting and sediment transport;
3. Use the 1-3 method for cleaning and maintaining existing ditches where conditions permit. Otherwise, slopes should be stabilized using a recognized method based on the most current guides on the subject;
4. Revegetate the reworked or stripped areas immediately after completion of the work: herbaceous vegetation shall be established and must cover the entire surface of the slope to allow for adequate soil stabilization within a maximum of twelve months after final shaping;
5. Install structures to capture sediment before it is transported away from the building using a recognized method based on the most recent guides on the subject.

****These mitigation measures must be maintained until the soil is permanently stabilized****

EXAMPLE : EFFECTIVE SEDIMENTATION BASIN



Source : Morin Heights

EXAMPLE : EFFECTIVE MEASURES



Source : *Portrait et analyse de la réglementation municipale en Estrie sur le contrôle de l'érosion dans le cadre de travaux nécessitant du remaniement de sol* (Dominique Robert-Dubord)

EXAMPLE : INEFFECTIVE MEASURES



Source : *Portrait et analyse de la réglementation municipale en Estrie sur le contrôle de l'érosion dans le cadre de travaux nécessitant du remaniement de sol* (Dominique Robert-Dubord)

SHORELINE PROTECTION

- Work in the shoreline can lead to erosion, sedimentation of water, siltation of spawning grounds, loss of endangered species, increased risk of flooding and the deterioration of landscapes;
- Verify with your client to find out if they have the required authorizations from the Ministry. Generally, **this work requires a permit from the municipality as well as an authorization from the Ministère des Ressources naturelles et de la Faune.**
- When transporting materials, personnel, or equipment permitted in the shoreline, it is important to:
 1. Respect the access identified in the construction permit, and ensure that there is a designated area for the transportation of materials when landing;
 2. Have mitigation measures installed and corrected as you go along;
 3. Under a permit, when legally transporting construction materials within the shoreline, the materials must be adequately contained to prevent spills.

➤ **IN THE SHORELINE, IT IS PROHIBITED, among other things, to:**

- a) Construct or perform any work that is likely to destroy or alter the vegetative cover of the shoreline, expose the soil, affect the stability of the soil or encroach upon the shoreline;
- b) Fill, excavate or remove gravel from the shoreline and coastline of a lake, stream or river, or from a flood plain;
- c) Storing construction materials in the shoreline (15 m from a watercourse);
- d) Park machinery in the shoreline;
- e) Cutting existing trees and shrubs;
- f) Use pesticides within the first 3 metres of shoreline from the high-water mark;
- g) Channelling or altering the route of a watercourse;
- h) Constructing dams or dikes;
- i) Constructing a boat launch or covering the access to lakes or watercourses with waterproofing materials such as concrete, asphalt, etc.;
- j) Design a beach or add sand to an existing beach.

WILDLIFE PROTECTION

- Means to avoid attracting animals to the site :

Construction site management should include ways to avoid attracting animals to the site. Although site activities generally deter animals from entering the site during the day, animals may be attracted to the site at night or on weekends if there appears to be food, water or shelter available.

➤ **On site, before starting the day :**

1. Check for animals before each workday;
2. Inspect fences or other installations regularly to ensure their integrity and proper operation.

➤ **On site, the following should be avoided :**

1. Food and other waste :
 - a) The deposit (and prompt removal) of all waste shall be in animal-proof containers;
2. Water :
 - a) Limit the accumulation of stagnant water;
 - b) Limit fencing around temporary stormwater basins and other bodies of water on site;
 - c) Ensure appropriate sediment and erosion control measures are implemented to protect surface water quality near or downstream of the work site.
3. Shelters :
 - a) Provide cover for piles of soil, fill, brush, rocks and other loose materials;
 - b) Ensure that the ends of pipes are sealed, as required, to prevent animals from entering. Ensure proper sealing of unoccupied trailers, dumpsters, boxes and buildings at the end of each workday to prevent animals from entering.