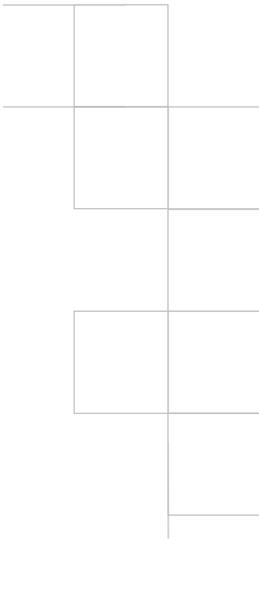


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**Subject: Salt Management Plan
Residential Development at
508 Beechwood Drive, Waterloo, Ontario**

1. Introduction & Objectives

The proposed development consists of a new residential building along with redevelopment of existing parking areas as shown in Figure P1.

The salt management plan will suggest practical methods of winter maintenance that limit the chloride impact at the source.

2. Site Description & Storm Water Runoff

The site is rectangular in shape with a single access driveway from Beechwood Drive. The total area of the site is approximately 0.74 ha and contains the existing apartment building, parking structure, paved parking lot, driveway and landscaped areas. It is proposed to replace the existing parking structure with an apartment building including below ground parking garage that has a larger footprint. The pre development asphalt area is 3916 m², whereas the post development asphalt area is 2019 m².

The site has a falling gradient from the south west corner towards the north east . The parking areas have catch basins that collect storm water and convey it to the Beechwood Drive storm sewer. The proposed redevelopment also maintains the same drainage pattern, however provides a higher degree of quality control through provision of an oil/grit separator. The pavement areas have also decreased which means less salt will be applied in the post development scenario.

3. Identification of Traffic Areas and Sensitive Features

The parking area and driveway at ground level are used more frequently and kept clear of the snow to allow visitors access to the building. All driveways and sidewalks are kept clear of the snow with limited application of ice melting products.

Landscaped areas at the front of the lot along Beechwood Road have the parking structure below them, therefore salt will not be carried to subsoil layers .

4. Identification of Snow-Storage/Disposal Areas

The site will have designated snow storage areas at the south and north ends of the property.

5. Best management Practices to reduce Salt Use

The following best management practices for snow removal and application of salt during the operational life of this development,

- Application Methods: In order to avoid excessive ice salt usage on the property, the primary winter maintenance method of the site will be timely removal of snow and ice from roadways and sidewalks.

Sodium Chloride is understood to have an effective temperature range for ice melting

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between +4 deg C and -1 deg C. Sodium Chloride application will be avoided outside these temperature ranges to avoid excessive chloride concentration.

- Drainage: All paved surfaces are collected by a piped storm drainage network. which collects and routes the runoff to an oil/grit separator. No direct infiltration of significant salt application surfaces expected in the proposed redevelopment.
- Application Rates: In order to mitigate over application of sodium chloride, the owner will follow the recommendations noted on this plan. The owner will hire a winter maintenance contractor who is familiar with salt management reduction practices and is familiar with best management practices.
- A key component of the Salt Management Plan is tracking of overall salt usage on site. Typical application rates in parking lots are 100 grams per square metre. The application rates will not be exceeded in areas that require salt application.
- Equipment for snow removal will be stored/kept off site.
- No snow removal equipment washing is to be carried out on site.
- Site inspections by winter maintenance staff will be carried out on a regular basis.
- Excess snow will be hauled to a properly designated snow disposal site if required.
- The winter maintenance contractor will be trained to handle a salt spill.

6. Summary

In conclusion, the proposed salt management plan will effectively reduce chloride salt use on the site. The areas where salt application is required for safety will be selected with a view to limit application. The owner and contractor will be made aware of this report and recommended salt management best practices.

Respectfully submitted,

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