



Landscaping guidelines with roundabouts

Introduction

The modern roundabout is a traffic control device. It is a form of circular intersection where traffic flows counter clockwise around a raised central island, thereby preventing vehicles from passing through the intersection on a linear path. Traffic circulates counter-clockwise around a centre island. Entering motorists yield to traffic already circulating in the roundabout. Roundabouts offer the opportunity to improve intersection safety and potentially reduce maintenance costs while increasing intersection capacity and reducing delay.



Landscaping the central island of the roundabout can enhance the safety by making the intersection a focal point and by lowering speeds. Also, the use of landscaping at a roundabout is one of the distinguishing features that give roundabouts an aesthetic advantage over traditional intersections. For this reason, the City of Calgary has developed this document to assist the design of the landscaping within roundabouts. Current practice is to landscape the central island with grass and/or low maintenance/drought-tolerate plants. This document is meant to provide guidance for measures above and beyond those standards.



Principles

Landscaping or features within a roundabout should be a part of the design and not simply an enhancement undertaken after construction of the roundabout. The landscaping or features should adhere to all safety requirements while, at the same time, increasing the efficiency of the intersection treatment. Because the visibility of the intersection layout is an important element in the efficiency of the design, the landscaping must not interfere with drivers perception of the layout. The type of road, design speeds and amount of area available for landscaping must all be taken into consideration. The landscaping or features should fit within the context of the surrounding area, should not distract drivers, and should not interfere with pedestrian safety.

Considerations

Treatments

- The landscaping or features within the centre island are a component to improve the safety of a roundabout. Elements should be selected so the sight distances are maintained not exceeded. This will encourage lower speeds. Therefore, different elements should be considered for the inner and out portions of the central island. The planting zone width within the central island will depend on the size of the roundabout and the required sight distances. A raised central island with garden soil and mulch

instead of top soil is desired to reduce salt splashing, improve plant growth and reduce weeds.

- Landscaping or features that distract the driver should be avoided. Therefore, anything that moves or requires detailed reading should be avoided i.e. windmills, water from a fountain, advertising, etc. Landscaping or features should be seen and appreciated from the approach to the roundabout, not at the point where a motorist is yielding.
- Current practice is to landscape the central island with grass and/or low maintenance/drought-tolerate plants. This guide suggests that the landscaping be a complete low maintenance, salt resistant, drought resistant design that provides continuous vegetative colour between the spring and fall months.
- The size of the roundabout should influence the landscaping or features. Landscaping specification should, at a minimum, follow the Standard specification for landscape construction by the City of Calgary. (<http://www.calgary.ca/PDA/DBA/Pages/Urban-Development/Publications.aspx>)



Pedestrians

- Landscaping treatments should not be designed to encourage pedestrians into the centre island. If concrete treatments are part of a design, they should not resemble a

sidewalk or pathway. The use of coloured or textured concrete can be an effective measures to discourage pedestrians.



Utilities

- Major landscaping features must not interfere with the access to utilities or ability to perform maintenance on utilities that may pass through the roundabout. However, shrubs or movable features may be considered within the line assignment of utilities. For details on utilities layout through a roundabout, please contact Water Resources.
- Larger roundabouts provide excellent opportunities for Low Impact Development (LID) features. LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. If LID features are being examined, Roads and Water Resources should be consulted early in the process
- Irrigation systems shall not be provided within a roundabout due to water sprays creating safety concerns for motorists and maintenance issues.

Streetlighting

- Streetlighting should meet the City of Calgary standards for lighting the roadway and pedestrian areas.

- If decorative lighting is part of a design, solar lighting should be investigated as utility connections within a roundabout are not desired.

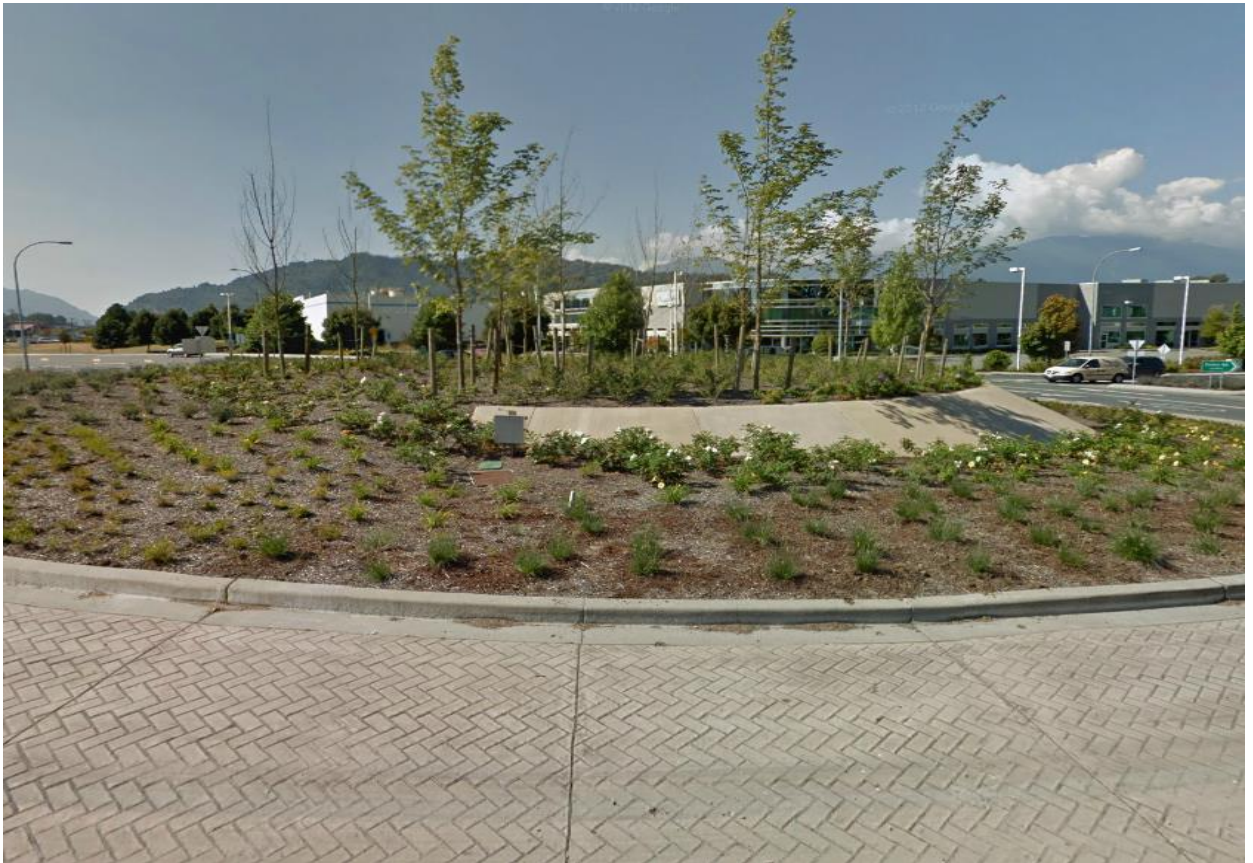
Signage

- Roundabouts are a traffic control device and the landscaping is part of the design. The landscaping / feature elements should not include signage, lettering or advertising that would distract motorists and / or entice pedestrians into the centre of the roundabout. The only exception would be a community name.



Maintenance

- Maintenance of landscaping or features should be considered before the design of the roundabout is completed. The responsible party for the maintenance should be identified early in the design process. New roundabouts with landscaping beyond city standards should have an enhanced maintenance agreement with the Parks Department, providing for maintenance, or they should have guaranteed funding for maintenance of the landscaping by private organizations (i.e. homeowners associations, property management agencies, developers, etc.). Retrofit roundabouts should have low-maintenance landscaping or a maintenance agreement similar to new roundabouts.
- If feature elements are installed within the central island, a license of occupation agreement is needed with the Roads business unit. Please contact Corporate Properties to enter into this agreement.
- Maintenance vehicle access should also be considered as part of the design.





Reference

Acknowledge:

City of Ontario, "Traffic and Transportation Guidelines", Aug 2013-11-28

Federal Highways Administration publication: "Roundabouts: An Informational Guide"

City of Colorado Springs – Roundabout Design Standards, Oct 2005

Florida DOT, Florida Roundabout Guide

City of Halifax, Roundabouts Aesthetic and Design Report, Jan 2011