



URBAN DEVELOPMENT INSTITUTE - CALGARY INFORMATION BULLETIN # 152

Residential Street Design Policy Implementation

December 13, 2013

On May 28, 2013 City Council approved the recommendations of the April 17, 2013 SPC on Transportation & Transit report: Residential Street Design Policy Implementation Update. Recommendation #2 directed administration to continue working group meetings with UDI to work through outstanding implementation issues related to the Policy that was approved by Council in November 2012.

Since that direction, a number of implementation issues have been resolved. While development agreement conditions will be revised in 2014 as part of the normal discussions with UDI, this bulletin serves to communicate these new and revised conditions and requirements in advance as the new residential street design standards are already being implemented.

As the remaining implementation issues (including old to new street standard transitions) fall under the purview of Parks and Urban Development, Transportation Planning is no longer in a position to lead these discussions. Moving forward, administration of the policy (including resolving transitional design issues) will be the responsibility of the Corporate Planning and Applications Group (CPAG).

Escalations

Disagreements between CPAG and a Tentative Plan applicant regarding the application of this policy will be addressed according to the established CPAG issue resolution process.

Transitions

Regardless of the location of a Tentative Plan boundary, transition from the existing residential street cross section to the new residential street cross section shall occur at a logical location (e.g. nearest intersection, 90 degree corner).

For more information, please contact the following City representatives:

Parks:

Kent Morelli at 403-268-4764 or Kent.Morelli@calgary.ca

Urban Development:

Lawrence Wong at 403-268-1714 or Lawrence.wong@calgary.ca

For your convenience, all UDI – Calgary bulletins are posted on our website in the “members only” section at www.udicalgary.com.

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Industry Bulletin #152 – December 13, 2013

1. Outline Plan & Tentative Plan Conditions

Outline Plan DTR Comments

Condition of Approval:

Street tree obligations associated with the City's ***Residential Street Design*** policy must be met in all Outline Plan areas approved after November 5, 2012 and areas for which Tentative Plans and Preliminary Construction Drawings were submitted after January 14, 2013. Provide, for Parks' review and approval, the following information regarding the street tree strategy for applicable areas:

With the submission of each **Tentative Plan**:

- Cross-sections for any non-conforming street designs, which confirm that street trees can be satisfactorily accommodated within them, via unencumbered tree growing area.

With the submission of all **Engineering Drawings**:

- Cross-sections for any non-conforming street designs, which confirm that street trees can be satisfactorily accommodated within them, via unencumbered tree growing area.

With the submission of all **Landscape Construction Drawings**:

- An accounting of the number of street trees already provided within the greater Outline Plan area and an updated tally of outstanding tree obligations;
- A calculation of the street tree obligation for the subject area, based on the number of residential lots within;
- A street tree plan and summary list, indicating the specific location, size (small/medium/large) and species of new trees to be planted;
- Specific note of any approved street tree credits that are being sought, per the ***Residential Street Design*** policy.

Tentative Plan DTR Comments:

Prior To Decision Comment:

Street tree obligations associated with the City's ***Residential Street Design*** policy must be met in all Outline Plan areas approved after November 5, 2012 and areas for which Tentative Plans and Preliminary Construction Drawings were submitted after January 14, 2013. Provide, for Parks' review and approval, the following information regarding the street tree strategy for applicable areas:

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- Cross-sections for any non-conforming street designs, which confirm that street trees can be satisfactorily accommodated within them, via unencumbered tree growing area.

Advisory Comment:

Street tree obligations associated with the City's **Residential Street Design** policy must be met in all Outline Plan areas approved after November 5, 2012 and areas for which Tentative Plans and Preliminary Construction Drawings were submitted after January 14, 2013. Provide, for Parks' review and approval, the following information regarding the street tree strategy for applicable areas:

With the submission of all **Engineering Drawings:**

- Cross-sections for any non-conforming street designs, which confirm that street trees can be satisfactorily accommodated within them, via unencumbered tree growing area.

With the submission of all **Landscape Construction Drawings:**

- An accounting of the number of street trees already provided within the greater Outline Plan area and an updated tally of outstanding tree obligations;
- A calculation of the street tree obligation for the subject area, based on the number of residential lots within;
- A street tree plan and summary list, indicating the specific location, size (small/medium/large) and species of new trees to be planted;
- Specific note of any approved street tree credits that are being sought, per the **Residential Street Design** policy.

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2. Tree Species List

This list is a suggested list of trees and their comparative soil volume needs based on the mature tree size. This list is not comprehensive and other tree choices shall be considered based on how well they perform in local climates.

Suggested Tree List Based on Soil Volume		
Common Name	Botanical Name	Comments
Large Estimated mature height >13 meters; requires a growing area of 30 square meters		
Ash (species & cultivars)	<i>Fraxinus</i> spp.	Green ash, white ash, Tuxedo
Bur oak	<i>Quercus macrocarpa</i>	*Very slow growth rate but would be appropriate for large and medium soil volumes
Elm (species & cultivars)	<i>Ulmus</i> spp.	Prefer true American elm species; limited use of Brandon elm; Siberian elm
Manitoba maple (var.)	<i>Acer negundo</i>	Site specific; potentially invasive
Poplar (species and cultivars)	<i>Populus balsamifera</i>	NOT considered for locations adjacent to sidewalks but for other locations where number of trees could not be met large open spaces; Tristis
Medium Estimated mature height 8-13 meters; requires a growing area of 20 square meters		
Amur cherry	<i>Prunus maackii</i>	
Birch (species & cultivars)	<i>Betula</i> spp.	European, paper birch, river birch, weeping birch; Purple Rain
Bur oak	<i>Quercus macrocarpa</i>	*Very slow growth rate but would be appropriate for large and medium soil volumes
European Mountain ash (cultivars & hybrids)	<i>Sorbus aucuparia</i>	Oak leaf, Russian Mountain
Linden (specie & cultivars)	<i>Tillia</i> spp.	Dropmore
Mayday	<i>Prunus padus commutata</i>	
Ohio buckeye	<i>Aesculus glabra</i>	Low branching, wide spreading
Paskapoo Poplar	<i>Populus balsamifera</i> 'Paskapoo'	Dwarf poplar; may be appropriate in certain site; tall as it is wide
Trembling aspen	<i>Populus tremuloides</i>	
Ussurian pear	PYRUS USSURIENSIS	
Small Estimated mature height < 8 meters; requires a growing area of 10 square meters		
Amur maple (species & cultivars)	<i>Acer ginnala</i>	Flame
Apples (cultivars & hybrids)	<i>Malus</i> spp.	
Crab-apples (cultivars & hybrids)	<i>Malus</i> spp.	Pink Spire, Thunderchild
Chokecherry	<i>Prunus virginiana</i>	Single stem, Schubert
Hawthorn	<i>Crataegus</i> spp.	Snowbird, Toba
Japanese tree lilac (cultivars)	<i>Syringa reticulate</i>	Ivory Silk
Pin cherry	<i>Prunus pensylvanica</i>	Single stem, Mary Liss
Serviceberry (hybrids & cultivars)	<i>Amelanchier x grandiflora</i>	Specify single stem, Spring Flurry
Tartarian maple tree (species & cultivars)	<i>Acer tataricum</i>	Hotwings

NOTE: Spp. is the abbreviation used to reference many species within a genus instead of listing them all. For example there are paper birch and river birch (different species) within the birch tree group (genus).

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3. Alternative Locations for Tree Plantings

It is the intent of the Policy to improve community liveability through design including increasing the quantity of trees and pedestrian facilities in new residential communities. These trees shall not be used towards tree and/or vegetation requirements..

*In accordance with Policy 1.5 Street Trees 1.5.1 Quantity Requirements
One tree shall be planted within the road right-of-way in front of each lot.*

* In the case where a tree cannot be accommodated within the road right of way, it shall be provided elsewhere in the community.

Priority shall be given to locations in residential areas that improve streetscape and walkability. Alternative tree planting locations options to be considered include the following:

1. Residential lots within the community that can accommodate more than one (1) tree along the frontage;
2. Residential corner lots within the community that can accommodate tree(s) along the side of the lot;
3. Residential locations that are adjacent to sidewalks and are publically owned spaces such as road right of ways, Parks, and schools.
4. Other locations proposed by the developer/applicant maybe considered on a case by case basis.

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4. Schedule

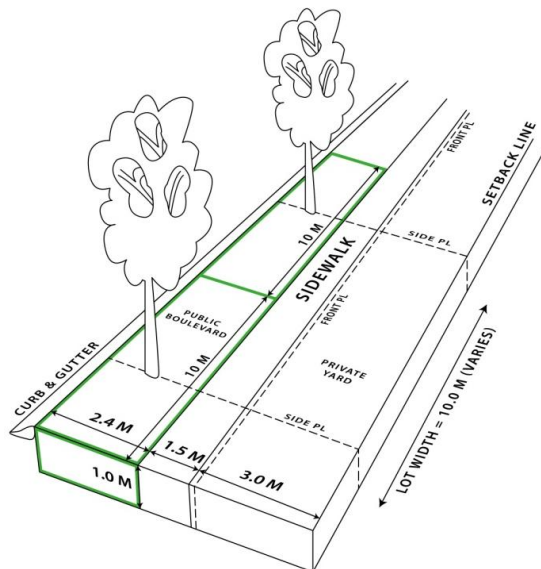
Residential Street Tree Calculations Schedule EXAMPLE
Number of Residential Lots = 100
Number of Trees = 100 (1 per lot)
Required Trees
Tree Credit Calculations: Large Tree Planting Credit = 15% Tree Credit = # of lots x credit % Required Trees = Number of Residential Lots – Tree Credit Credit Requirements Large Tree Planting Total = Required Number of Trees

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5. Growing Area Calculations

The following sample growing area calculations are based on a typical 10 metre wide residential lot. The soil material for the surface topsoil and around the tree rootball shall be as indicated in the latest Parks Development Guidelines and Standard Specifications for Landscaping. This is less than the entire soil volume shown here.

SW-L Standard (Separate Sidewalk, Rear Lane)



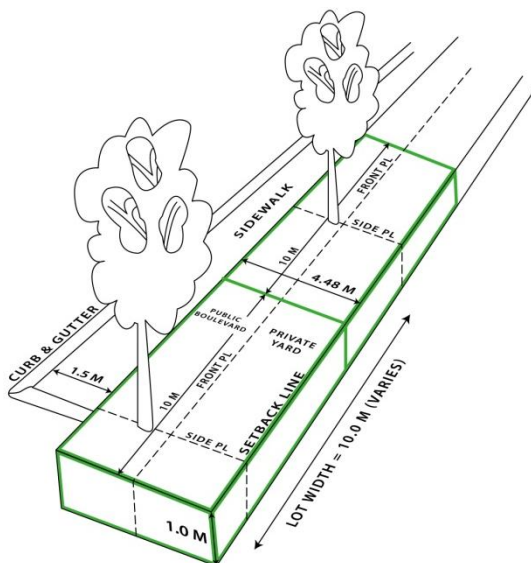
Growing Area:

10.0m lot width x
2.4m boulevard = **24 m²**

(@1.0m soil depth, volume = 24 m³,
therefore, medium species trees can be
supported.)*

*Note: Urban Forestry will allow „sharing‘ of
growing area as this standard has a continuous
boulevard. Therefore, large species trees can be
supported.

M-L Standard (Monolithic Sidewalk, Rear Lane)



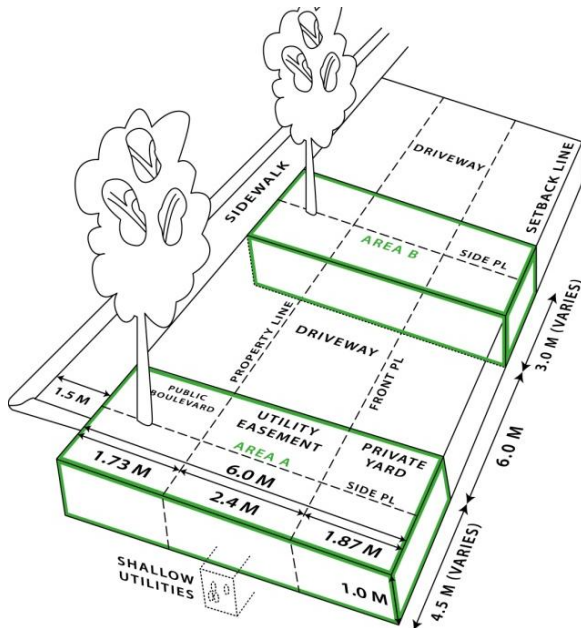
Growing Area:

10.0m lot width x
4.5m boulevard/front yard = **45 m²**

(@1.0m soil depth, volume = 45 m³, therefore,
large species trees can be supported.)

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M Standard (Monolithic Sidewalk, No Rear Lane)



Growing Area (Area A):

4.5m width x
6.0m boulevard/front yard = **27 m²**
(@1.0m soil depth, volume = 27 m³)
Therefore, large* species trees can be supported)

*At the discretion of Urban Forestry.

Growing Area (Area B):

3.0m width x
6.0m boulevard/front yard = **18 m²**
(@1.0m soil depth, volume = 18 m³)
Therefore, medium* species trees can be supported)

*At the discretion of Urban Forestry.

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6. Incentives

To encourage applicants to design with sustainable tree planting measures in mind, the following “credits” would be considered in the calculation in the reduction of tree number requirements. Applicants can apply for one (1) credit from the list below.

1. Large Tree Planting Credit 15%

In an effort to encourage the planting of large trees and acknowledge the exponential benefits (environmental, economical, social) that larger trees provide, plans that have more than 75% of their required trees as large shade tree types

2. Species Diversity Credit 10%

In an effort to ensure that there is diversity throughout the urban forest, plans that meet the “species diversity rule” of the following: (1) plant no more than 10% of any species, (2) no more than 20 % of any genus, and (3) no more than 30 % of any family.

3. Increase in Soil Layer 10%

In an effort to improve the living conditions for trees (increase water absorption, nutrients), plans that apply the most current City standard for “soil “within the entire soil volume calculated area.

4. Native Tree Species Planting 10%

In an effort to encourage the planting of native plant species due to the potential of reduced maintenance costs, resistance to local pests and diseases and also the many benefits provided to the local ecosystem (not invasive, habitat), plans that have more than 50% native trees.

5. Tree Preservation Credit (TBD)

Although this may be difficult and also may not apply in many situations in new communities, there may be opportunity where it may be practical. In an effort to preserve existing tree canopy, healthy large existing trees located on public land that can be preserved throughout the development process maybe given credit. This will have to be determined on a case by case basis due to the many unknown factors. Consideration should be given to preserve trees that are in locations that would support the intent of the “Policy”.

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