

Lipai, Natasha

From: Lipai, Natasha
Sent: Tuesday, May 17, 2016 3:16 PM
To: Lipai, Natasha
Subject: FW: Vancouver planting standards question

Begin forwarded message:

From: "Ray, Charles" <Charles.Ray@cityofvancouver.us>
Date: May 17, 2016 at 9:19:03 AM PDT
To: "'Jenn.Cairo@portlandoregon.gov'" <Jenn.Cairo@portlandoregon.gov>
Subject: RE: Vancouver planting standards question

Hi Jenn:

Vancouver's minimum planter strip width for tree planting is 3 feet.

Our rationale for not planting trees in planters smaller than 3 feet is to reduce conflicts with traffic, pedestrians, cyclist, infrastructure and only provides enough space for a small tree/large shrub.

We want new trees planted at least 1.5 feet from back of curb and from sidewalk to minimize future hardscape damage given the mature size of a trees trunk, root flare and root system. Smaller than 3 feet would put the new tree 1 foot or closer to the curb with minimal root space to mature. This only allows for a small tree/large shrub planted right off the right of way. Given it is a small tree we would most likely not able to remove lower branches to accommodate traffic and cyclists to 10-14 feet or sight visibility or 7-8 feet along the sidewalk for pedestrians. We strive to create a clear zone so that shrubs are maintained so that foliage height above pavement does not exceed 2.5 feet and street trees limbed up to a height at a minimum of 10 feet consistent with ANSI A300 standards to provide for sight visibility.

Let me know if you have any questions.
Charles

Charles Ray | Urban Forester



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Casey,

Below is a summary for my reasoning for prohibiting tree planting in strips narrower than 4'. In my decade as an arborist in Manhattan, The Bronx, Brooklyn and Corvallis I have never seen trees thrive in narrow strips when standard planting methods are used. I have seen many trees uprooted, stunted and killed by such planting regimes and find them to be shortsighted at best. Planting a tree is something which requires foresight, wisdom, planning and a willingness to do things right. Trees are not short-lived decoration; they are a critical part of city infrastructure and should be treated as such utilizing the best and most current industry standards to ensure longevity and a return on the initial (not insignificant) investment of time and money.


Reason for minimum of 4' planting width

1. Simple biology, trees need sufficient rooting space in order provide water and nutrients to the rest of the tree.
2. Simple physics: stand on 1 foot and see how easy it is stand outside in a stiff breeze, limited rooting volume is a defect noted on the TRAQ risk assessment forms from ISA Intentionally reducing available soil volume by planting a tree in too small a pit runs counter to all best management practices and the intent of ISA and ANSI standards for tree care.
3. Cost benefit analysis: Yes we could plant 100s of crabapples at a cost of \$600/tree (cost of tree, soil, staff time to plant water and prune the tree for 3 years) but these trees (as with other small ornamentals) require more inputs to retain good form and vigor and provide almost no benefits to the community. These small trees intercept minimal CO₂, minimal storm water (due to insufficient pit size) and provide almost no shade. Doing little to nothing to reduce the urban heat island effect or reduce cooling costs of adjacent homes. In addition a small tree will not contribute the same to the home value as a larger one.
4. Our soils area already highly compacted clay-loams that often lead to shallow rooting for many species. I've seen ornamental cherries in 5' strips lifting a sidewalk after 10 years. Put that same tree in a 3' strip and you'll have sidewalk problems sooner. Thus you spend money to plant a tree with few benefits that ends up costing the city even more money.
5. If you insist on planting in a 3' strip you need to make use of some of the many alternative planting technologies. This requires removal of sidewalk, installation of structural soil, sylvacell or other engineered solutions to increase soil permeability thereby increasing available root space.

If you are unwilling or unable to make that investment then select a more reasonable planting location

6. Per Cornell University: "Minimum soil volumes for root space are suggested to be 1–2 ft³ for each square foot of projected mature crown (Lindsey and Bassuk 1991). Current research suggests it's actually closer to 2 cubic feet.

Respectfully,



Jon Pywell
Board Certified Master Arborist NY5361BM
City of Corvallis Department of Parks & Recreation