From: Christine Southwick[SMTP:CLSOUTH@U.WASHINGTON.EDU]
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July 7, 2016

Greetings Planning Commission members,

In June of this year, I attended a presentation given by the Washington State Dept. of Natural Resources called, "Quality Trees, Quality Cities".
I thought that it was a great presentation. I have attached the four pages of web links that WA DNR believes to be helpful for city planners and citizens interested in creating/increasing quality canopy in their city, and also best management practices (BMP).
I came away with awareness of three major points which I want to share with the City of Shoreline Planning Commission since I believe that these are important issues that enhance Shoreline's ability to improve the green and open space areas in Shoreline and especially the Light Rail zoning areas.
1.   Cities that make the commitment to their natural resources, which includes quality canopies, are successful in maintaining/increasing green spaces. One of the most cost-effective ways that tree-oriented cities in WA have funded this effort is by a 5 cent storm-water assessment.

2.   Benefits of a healthy urban forest exceeds the cost of maintenance. There is solid data showing that for every $1.00 spent on trees and tree maintenance, there is a $2.00 return in benefits. Reduced cost in storm-water mitigation, less energy spent on controlling temperature variations, are two that are on most people's radar. Study after study has shown (Portland, OR being one such study) that those cities with more trees are safer cities. Two other benefits that are often over-looked are noise reduction, making a city more livable, and quality filtering of air—especially important to asthmatics, babies, and elders.

3.   MOST IMPORTANTLY, green space and canopy requirements need to be incorporated into the building permit and development regulations. Too often green space and canopy requirements are a separate regulation that isn't factored into the approval of a building permit. Once a builder has an approved building permit, it is usually too late to make the builder provide the open space/plantings that are another requirement, resulting in a building development always out of compliance.

Therefore, I urge you to incorporate, as part of the building permit process for the new Light Rail zoning, and hopefully all City of Shoreline new development, the tree and green space requirements to become part of the building requirements as recommended by you, the Planning Commission, and passed onto the City Council.

Respectfully,

Christine Southwick
Briarcrest neighborhood
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Quality Trees, Quality Cities

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www.dnrtreelink.wordpress.com

Resources and References

Valuation, costs and benefits of trees:

Tree Asset Management in Portland, Oregon.
http://www.cnt.org/sites/default/files/publications/CNT_PDXTreeAssetMgmt.pdf

Council of Tree and Landscape Appraisers – *Guide for Plant Appraisal, 9th Edition*. http://www.isa-arbor.com/store/product.aspx?ProductID=93

National Tree Benefit Calculator – http://www.treebenefits.com/calculator/

A Benefit-Cost Analysis of 10 Street Tree Species in Modesto, California, U.S.—
http://www.fs.fed.us/psw/programs/uesd/uep/products/cufr_162.pdf?

Tree City USA Program— https://www.arborday.org/programs/treecityusa

Green Cities :: Good Health http://depts.washington.edu/hhwb/

R.I. Hauer, J.M. Vogt, and B. C Fisher. February 2015. The Cost of Not Maintaining the Urban Forest, *Arborist News*, 24:1. p. 13—
http://www.isa-arbor.com/education/resources/CNMTArboristNewsArticle.pdf

Industry standards and best practices:

Industry Standards developed by the American national Standards Institute:
- Z133 Safety Standard for Tree Care Operations
- A300 Pruning Standard -Part 1
- A300 Soil Management Standard - Part 2
- A300 Lightning Protection Systems Standard - Part 3

urban tree foundation. website

- A300 Construction Management Standard - Part 4
- A300 Planting and Transplanting Standard - Part 6
- A300 Integrated Vegetation Management Standard - Part 7
- A300 Root Management Standard - Part 8
- A300 Tree Risk Assessment Standard - Part 9
- Z60 Standards for Nursery Stock
- Pruning (Spanish)
- Utility Pruning (Spanish)
- Tree Planting (Spanish)
- Integrated Vegetation Management (Spanish)

Industry Standards and Best Practices Manuals for Tree Care available for purchase—
http://www.isa-arbor.com/store/category.aspx?cid=117

ANSI Z60 Standards for Nursery Stock—
http://americanhort.org/documents/ansi_nursery_stock_standards_americanhort_2014.pdf\

International Society of Arboriculture; Arborist Certification and Credentials—
http://www.isa-arbor.com/certification/index.aspx

Overview of best practices:

Tree Identification
> Common Trees of the Pacific Northwest—http://oregonstate.edu/trees/dichotomous_key.html

> What tree is that? – https://www.arborday.org/trees/whattree/WhatTree.cfm?ItemID=E6A

Tree and Site Selection
> Right Tree in the Right Place— https://www.arborday.org/trees/righttreeandplace/

> Minimum soil volume for trees—
> http://www.deeproot.com/blog/blog-entries/our-recommended-soil-volume-for-urban-trees

Planting
> Washington DNR, Proper Planting Begins Below Ground –
> http://file.dnr.wa.gov/publications/rp_urban_treelinkspr04.pdf

> Dr. Ed Gilman, Steps to planting a tree, University of Florida—
> http://hort.ifas.ufl.edu/woody/summary-planting.shtml

Mulching
> Proper Mulching Technique— https://www.arborday.org/trees/tips/mulching.cfm

Watering

Tree watering— https://www.arborday.org/trees/tips/watering.cfm

Seattle Dept. of Transportation watering recommendations—
http://www.seattle.gov/transportation/docs/wateringtrees08.pdf

Pruning

USFS How to Prune Trees— *great!*
http://na.fs.fed.us/spfo/pubs/howtos/ht_prune/htprune-rev-2012-screen.pdf

Dr. Ed Gilman, Structural Tree Pruning Factsheet, University of Florida—
http://hort.ifas.ufl.edu/woody/documents/structural.pdf

WA DNR anti-topping resources— http://www.dnr.wa.gov/anti-tree-topping

Tree Protection

Tree Protection on Construction and Development Sites, A Best Management Guidebook for the Pacific Northwest—
http://extensionweb.forestry.oregonstate.edu/sites/forestry-extension/files/rp_urban_treeprtctnguidbk(1).pdf

Avoiding Tree Damage During Construction—
http://www.treesaregood.com/treecare/resources/AvoidingTreeDamage.pdf

Pest and Disease Management

Hortsense, A website dedicated to Integrated Pest Management strategies for common ornamental trees and shrubs in Washington, Washington State University—
http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=1

Fertilization

Fertilizing Trees and Shrubs—
http://www.mortonarb.org/trees-plants/tree-and-plant-advice/horticulture-care/fertilizing

Dr. John Ball, Prescriptive Fertilization for Trees, South Dakota State University—
http://grounds-mag.com/mag/grounds_maintenance_prescription_fertilization_trees/

Urban Forestry Planning and Management:

A GUIDE TO COMMUNITY AND URBAN FORESTRY PROGRAMMING, WASHINGTON STATE DEPT. OF COMMERCE AND THE EVERGREEN COMMUNITIES PARTNERSHIP TASK FORCE—
http://www.commerce.wa.gov/Documents/GMS-ECA-Comm-Urban-Forestry.pdf

Urban Forestry Best Management Practices for Public Works Managers, American Public Works Association, Volumes 1-4—https://www2.apwa.net/about/coopagreements/urbanforestry/

Schwab, J.C. 2008. Planning the Urban Forest, American Planning Association—
https://www.na.fs.fed.us/urban/planning_uf_apa.pdf

Vermont Urban and Community Forestry Program. Guidelines for Developing Urban and Community Forestry Plans—http://www.vtfpr.org/urban/documents/PlanGuid.pdf

Urban Forestry Management Plan Toolkit—http://ufmptoolkit.com/resources-guides-to-UFMP.htm

Bernhardt and Swiecki. 1991, updated 2001. Guidelines for Developing and Evaluating Tree Ordinances—
http://www.isa-arbor.com/education/resources/educ_TreeOrdinanceGuidelines.pdf

North Carolina Cooperative Extension Service. 2006. Developing Successful Tree Ordinances—
http://content.ces.ncsu.edu/20377.pdf.

Smart Trees Pacific. Urban Forestry Emergency Operations Planning Guide for Storm Response—
http://www.smarttreespacific.org/urban-forestry-emergency-operations-planning-guide/

US Forest Service. Urban Tree Risk Management: A Community Guide to Program Design and Implementation. Publication NA-TP-03-03—http://www.na.fs.fed.us/spfo/pubs/uf/utrmm/

EPA, Stormwater to Street trees—
http://www.davey.com/media/183712/Stormwater_to_Street_Trees.pdf

Seattle Department of Transportation Street Tree Manual--
http://www.seattle.gov/transportation/docs/Street%20Tree%20Manual%20WEB.pdf

Tacoma Urban Forestry Manual— http://www.cityoftacoma.org/cms/one.aspx?objectId=64782

Arboricultural Specifications and Standards of Practice for the City of Spokane—
https://static.spokanecity.org/documents/urbanforestry/treefacts/aboricultural-specifications.pdf

A Guide to Urban Forest Inventories— http://edis.ifas.ufl.edu/fr232

Develop a preventative pruning program—https://edis.ifas.ufl.edu/pdffiles/EP/EP31500.pdf

Benefits of a pruning cycle— http://www.umass.edu/urbantree/factsheets/33maintenancepruning.html