

Successful Tree Establishment **SITE ASSESSMENT**

La Fab / Hendrick Farm

Chelsea, Québec

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Tree Planting Begins with Site Assessment

“Look up, look all around, look down.”



***Recommended Urban Trees:
Site Assessment and
Tree Selection for Stress Tolerance***

*Urban Horticulture Institute
Department of Horticulture
Cornell University
Ithaca, New York*

<http://www.hort.cornell.edu/uhi/outreach/recurbtree/pdfs/~recurbtrees.pdf>

<https://treecanada.ca/resources/canadian-urban-forest-compendium/8-species-selection-and-planting/>

SITE CONSIDERATIONS

Soil Texture

Soil Structure

Soil pH

Compaction

Drainage

Microclimates

Sunlight

Conflicts

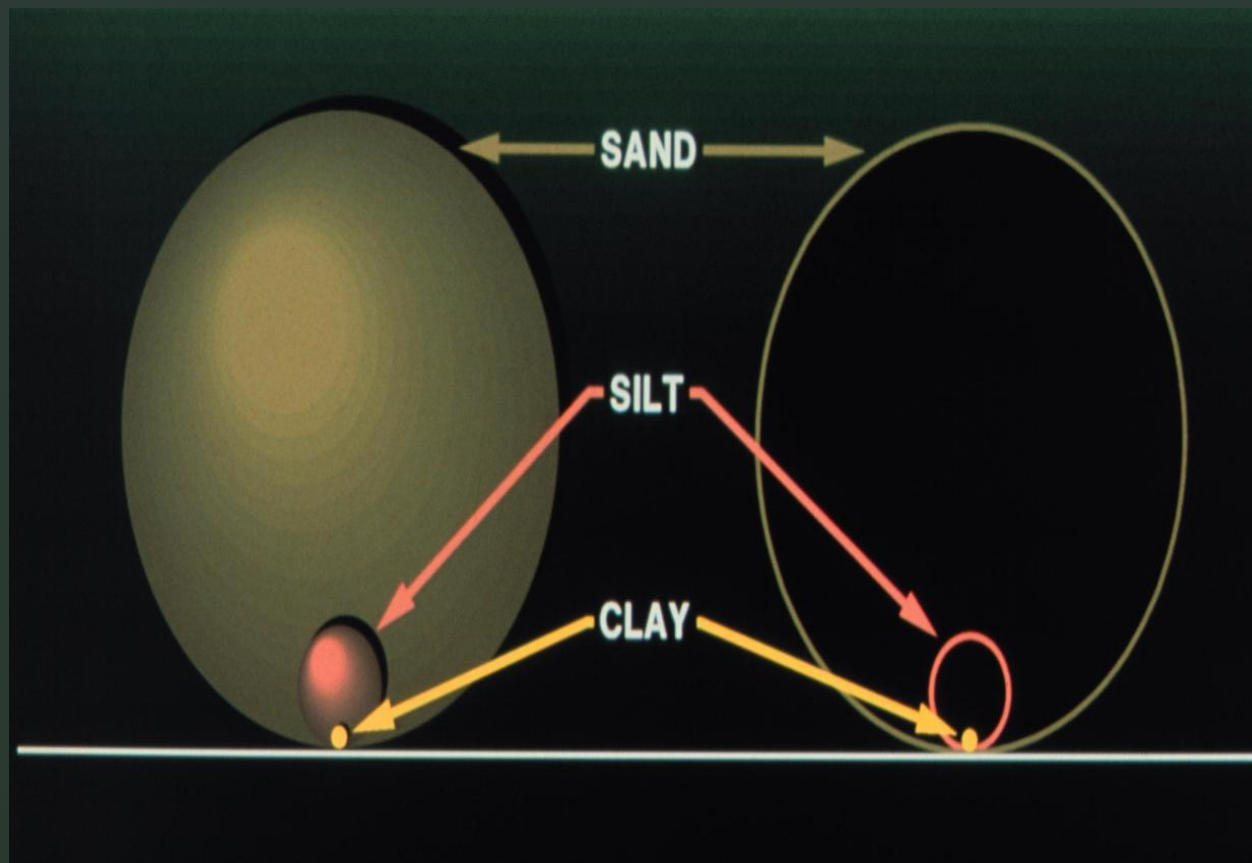
Soil Texture



Clayey, Sandy, Loamy.
Texture dictates drainage to a large extent.



Relative Sizes of Soil Particles







➤ **Soil Structure**

How particles are clumped together (aggregates)

A factor of organic matter and microbe abundance

Very important for healthy roots

Most urban soils have little or no structure...

Soil Structure Influences

- **Water infiltration/drainage**
- **Aeration**
- **Root penetration**
- **Pore space**
- **Action of microorganisms**
- **Availability of nutrients**

How do you destroy soil structure?

- **Work soil when it is too wet**
- **Chemicals (salts)**
- **Heavy equipment**
- **Excess foot traffic**

How do you BUILD soil structure?

- Organic Matter in Backfill (to 30%)
- Maintain Mulch Layer
- Mycorrhizae (possible inoculants)
- Improve Drainage
- Time

Compaction



Soil Penetrometer



Poor Drainage Goes with Compaction



Drainage



Even a Seasonally Wet Site Needs Tolerant Species.



Drought-Prone Sites



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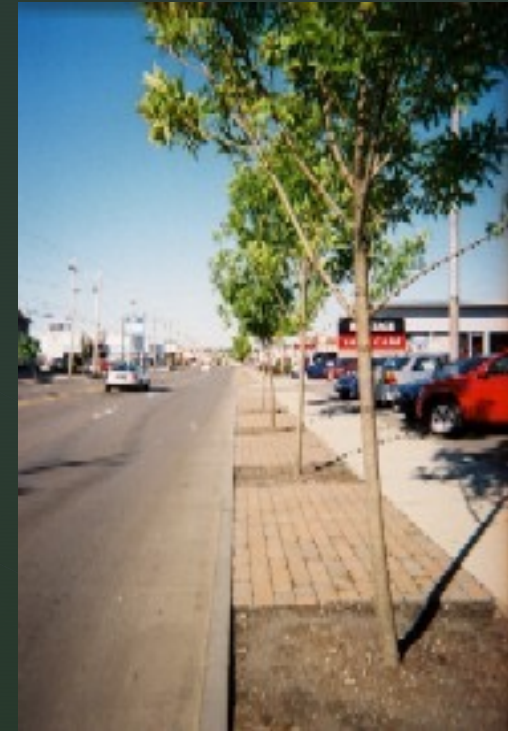
Light

- Generally, 6 hours minimum
- Some trees are shade-tolerant
(maple, oak)
- Other species need full sun
(crabapple, mountain-ash)

Wind = Another Possible Constraint



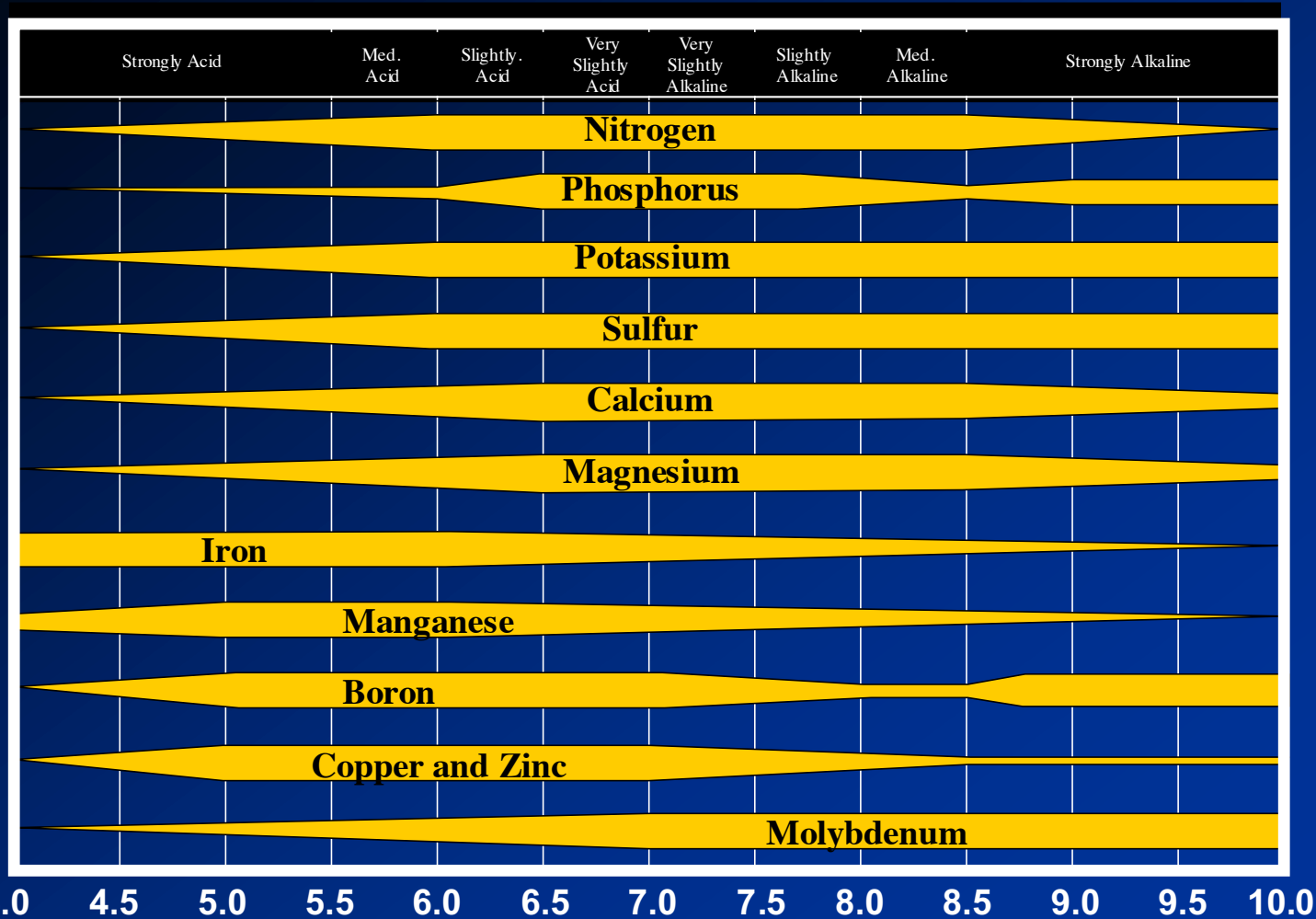
Heat Islands / Reflected Heat



SOIL pH



pH versus availability of nutrients



Test Kits are More Accurate than Meters.



**« Interveneinal Chlorosis »
of Pin / Red
Oaks when
pH is higher
than 6.5.**



Deicing Salt





July Marginal Leaf Scorch from salt in soil



Salt Spray Damage = « Witches' Broom »



Salt Spray = Burned Foliage / Killed Buds



« CONFLICTS »



■ **DIG SAFE!**

C'est la loi!

digsafecanada.ca

info-ex.com

Allow 3+ Business Days

Spatial Constraints







Questions?

