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1 page from Mario Lanthier

TREE SELECTION FOR SUSTAINABLE COMMUNITIES

Presentation by Dr. Larry Costello at the “2004 Farwest Show and Seminars”, August 26 in Portland, Oregon. Dr. Costello is with the University of California.

This forum of landscape architects, nurseries and arborists was to discuss current planting trends in urban areas. The presentation by Dr. Costello was an attempt to identify 6 areas where proper tree selection can impact future maintenance budgets.

1: Impact on infrastructure

- Estimate from California: \$1,300 to repair 20 foot of sidewalk damaged by root lift.
- In small spaces or in sidewalk plantings, select tree species with deep root characteristics, and consider root buttress width when measuring trunk diameter.
- If room is available, make larger planting holes with fencing. Current trends are planting holes 5 feet wide by 25 feet long, or 10 by 27, or 9 by 21, or 8 by 56.
- ISA publication: “Reducing infrastructure damage by tree roots”.

2: Trees under power line

- Trees requiring regular pruning to clear utility lines “are very expensive trees”.
- Know the expected mature size when planting under utility lines.
- University of California publication: “Trees under power lines”.

3: Water conservation

- Select trees species that are drought tolerant as part of water conservation efforts.
- University of California publication: “Estimating irrigation needs of landscape plants”.

4: Restricted soil volume

- Large soil volume is required to sustain large mature trees. Structural soil one answer.
- Journal of Arboriculture, 1992, Urban: “Required soil volume for ultimate tree size.”

5: Pruning requirements

- Vigorous tree species require more pruning. Select species that require less pruning.

6: Parking lots

- Trees are important for shade but the sites are difficult (sunburn, mechanical damage).
- Little technical information is available. More research is needed.