

ITEM	11
MANAGER'S REPORT NO.	60
COUNCIL MEETING	94/10/24

TO: CITY MANAGER 1994 October 13

FROM: DIRECTOR PLANNING AND BUILDING

SUBJECT: **FEASIBILITY OF TREE ROOT PRUNING
COMPREHENSIVE DEVELOPMENT REZONING**

PURPOSE: To report on the feasibility of root pruning of trees to be retained on development sites being rezoned to the Comprehensive Development District (CD).

RECOMMENDATION:

1. THAT this report be received for information purposes.

R E P O R T

At the 1994 August 22 Council meeting, a report was requested regarding the feasibility of requiring tree root pruning by a professional of trees which are to be retained on development sites being rezoned to the Comprehensive Development District (CD). Tree surveys are usually required for CD rezoning proposals and trees to be retained are then identified.

Tree root pruning was suggested as a possible procedure which could reduce potential damage and optimize tree retention prospects for those trees designated to be retained. The purpose of such root pruning would be to ameliorate negative effects such as those arising from excavations, site services, and root cutting arising from development, for example, apartments or office buildings with underground parking. If considered appropriate such root pruning would be intended to be pursued in advance of any on-site development and excavation.

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The Parks staff arborist was requested to respond to this request, and his response is as follows:

"Root pruning is generally conducted several years before transplanting of large specimen trees in an effort to reduce shock. The intent of root pruning is to encourage the production of absorbing roots within the transplant ball. Generally, 1/3 - 1/2 of the rootball circumference is trenched and backfilled with an inert material every year for 2 or 3 years, but not all at once.

"This procedure may be useful if used to encourage greater fibrous root development with the root zone protection area so that the tree is better able to cope with a drastically altered environment resulting from major redevelopment of a site. However, care is required to ensure that the trench, whether it is backfilled or not, does not end up as a ditch retaining run-off water thus negatively impacting the root zone.

"In addition, the size and age of the tree as well as its proximity to other trees must be considered when evaluating any preservation techniques.

"Older, larger trees are more sensitive to disturbance and require larger protection areas. Stability is a concern. For example, root pruning a large Douglas Fir when subjecting it to altered environmental conditions could threaten its stability as well as long-term health.

"Trees growing as members of a community will likely have many grafted roots with similar or other species - certainly the root mats will be inter-twined. If a tree within a community is to be preserved, then root pruning, watering, fertilizing, etc. may be useful to assist the tree to develop a totally independent and structurally/physiologically adequate root system.

"However, in the context of the short time interval of the development approvals process between notification and beginning of construction (say 3 to 12 months) root pruning may be considered to prevent ripping-type damage from construction machinery to trees to be preserved. Apart from this, it is our opinion that root pruning or trenching may add stress to a specimen about to undergo altered site conditions."

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Where propitious circumstances exist, root pruning is considered a beneficial procedure. However, as indicated, there are some difficulties to pursuing root pruning within the context of the development and construction process. For example, in most cases, the desired time span delay from notification to construction of 2 to 3 years is not available to allow for effective root pruning. Staff intend to keep in mind the merits of root pruning when circumstances arise where root pruning would be useful, such as in multi-phased development schemes. Reports to Council on Comprehensive Development (CD) rezoning applications where existing trees are to be retained will include a request for the applicant's landscape consultant to consider tree root pruning as one of the procedures or tools in pursuing appropriate landscape provisions.

This is for the information of Council.



D. G. Stenson
Director
Planning and Building

KI:lf

cc: Director Engineering
Director Recreation & Cultural Services
Chief Building Inspector

