TRANSPLANTING

Trees can be obtained from the nursery in many forms – bare root, container-grown, balled and burlapped, or dug by tree spade. Transplanting success can be high with all forms. Always put extra effort into the planting process to ensure a good start for your tree. The faster the root system is re-established, the better the chances for survival, and the more rapid it will grow.

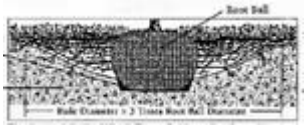
PLANTING

The planting hole should be wider than the roots or root ball, two to three times wider is recommended. The sides of the hole can slope up gradually, making it saucer- or bowl-shaped. *Don't dig any deeper than the depth of the roots or root ball* because the tree needs support from underneath to stabilize it. *Make sure the upper most lateral root of the plant is just below the soil surface*. Planting too deep is one of the most commonly encountered problems of landscape trees. It is not uncommon for trees to come from the nursery with the roots already too deep in the root ball. If the existing soil has a high clay content and is not friable (crumbly), it should be amended with up to 25 percent composted organic matter (leaves, lawn and garden waste, mushroom compost) before backfilling the hole. New roots will grow faster in a light, well-drained soil mixture. *Remove all ropes and burlap and discard or leave beneath the root ball if the tree is very large.* Wire baskets should be removed from at least the upper half of the root ball.

DRAINAGE

In poorly drained compacted soils, typical of modern housing developments, improved drainage may be needed. The planting hole can hold water like a bucket. *More urban trees die of root drowning than die of drying out*. To test the drainage of your planting hole, pour a few gallons of water in the hole before planting the tree. If it hasn't soaked in after an hour, you have a drainage problem. If the hole is near a slope, you may be able to run a small, underground drain pipe from the bottom of the planting hole to lower down on the slope. On level ground, planting the tree on a slight mound may be necessary to get the root system out of the waterlogged soil.

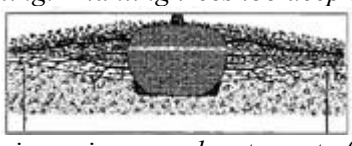
Leave Soil Firm
to Stabilize Root Ball



Hole Depth =
Depth of Root Ball
Or Slightly Less

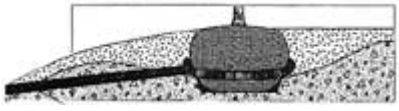
The planting hole should be shallow and wide to allow for rapid root growth after planting. Planting trees too deep is a common problem.

1/3 Root Ball
Above Grade



Where drainage is poor, elevate part of the root ball.

Perforated Pipe
for Drainage



Where drainage is poor on sloped land, provide a drain to a lower point.

FERTILIZATION
Fertilization at the time of planting is generally not recommended. Research has shown that fertilization is ineffective until the tree has had time partially to re-establish its root system.

SEASON TO TRANSPLANT
Although fall planting is ok, spring planting is best, as many species do not transplant well in the fall (e.g. oak, birch, poplar). Summer planting is possible if a judicious watering program is followed, particularly if the plants were dug from the nursery in spring or grown in containers.

MULCHING
A circle of mulch, 3-4 inches deep, with a diameter at least four times the diameter of the root ball, should be placed around every newly planted tree to conserve soil moisture and moderate soil temperatures. Studies have shown that *mulch has nearly double the growth-rate of trees* in the first few years after planting. Do not let mulch rest against trunk of plants.

STAKING
When stability is a problem, trunks of trees should be staked for 1-3 years until new roots stabilize the trees. Avoid staking too rigidly. Guy wires or staking material should be checked monthly during the growing season to prevent damage to the bark. Failure to loosen or remove staking wires has girdled many trees.

TRUNK WRAPPING
Young trees and trees with thin bark (e.g. maple) can be damaged by very cold weather or warm winter sun. Stems can be protected by wrapping trunks in late fall, from the bottom up so that the wrap overlaps like shingles. Numerous tree wrapping materials are available commercially. *Remove the tree wrap each spring.*

PRUNING
It is very important to ensure the best possible branch structure while trees are young. At time of planting, be sure to remove all crossing branches. Side branches of trees with a central leader should be evenly spaced up and down the trunk. Do not allow more than one leader in shade trees or conifers.

WATERING
Proper watering is the single most important aspect of maintenance of transplanted trees. Too much or too little water can cause damage. In the first few months after a tree is planted, most of its moisture comes from the root ball. The root ball can dry out in only a day or two, while surrounding soils remain moist. The only way to know is to probe the soil in the root ball and check its moisture. A metal rod or soil probe is good for this. Even after trees are well

established, they should be watered generously during periods of low rainfall (e.g. every week or 10 days).

TRANSPLANTING STRESS

Research has shown that a tree can lose up to 95% of its roots as a result of transplanting. This causes a great deal of stress. After transplanting the tree may form fewer and smaller leaves and grow very little growth. How long the stress period lasts depends on the size of the tree, the site, and the care it is given. A small tree (2-3 inch caliper), planted on a good site and given adequate water, should return to vigorous growth in 2-3 years. A poor site or inadequate care will lengthen this period. Large trees take longer to recover from transplanting than small trees; approximately 1 year of recovery is needed for each inch caliper. As long as branches are not dying and growth improves each year, the tree is doing well.