



## SURFACE ROOTS

When tree roots surface, they can cause problems. Walking and mowing in the area are difficult and sidewalks, patios and foundations may be damaged.

Generally any tree, given sufficient time, will produce surface roots. Most tree roots are only 12 to 18 inches below the soil and as they grow in diameter, they break the surface. Faster growing trees, such as silver maples, elms and willow, will produce surface roots faster.

There are several solutions to problem surface roots. You will need to identify your individual priorities.

While root pruning is often the first action people take in this situation, this should only be used if a structure such as a walk or foundation is in danger. Be aware that **permanent damage to the tree will result** from this action. If root pruning is necessary, follow these guidelines: **do not remove more than twenty-five percent** of the functioning roots under the tree canopy and root prune in the cool weather of late winter or early spring when there is less danger of dehydration. **Do not root prune after trees break bud in the spring**, as this will deprive the tree of water when it needs it the most.

Removing roots close to the main trunk may create a structural hazard, weakening not only the tree's health, but also its ability to withstand windstorms and the weight of snow. It is critical that no roots are cut in a circle around the trunk that is three times as wide as the trunk diameter.

Another solution, rather than cutting roots, is to add mulch to the area. Two to four inches of mulch should cover the roots without burying the tree too deeply. Use a material that allows some air circulation, like coarse bark or pine needles. To protect against trunk fungi and insect infestations, keep the mulch at least six inches away from the trunk itself.

A third solution would be planting a ground cover like vinca, pachysandra or asarum to cover the exposed roots. Work at least two inches of compost or topsoil into the area before planting.

Choosing the right tree can delay the appearance of surface roots. Good choices are oak, gingko, ash and linden. Poor choices include maple, sycamore, spruce, beech and some elms. Infrequent deep waterings will also help the growth of roots further below the ground. Frequent shallow waterings support the growth of roots closer to the surface.

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