

Sherdec Tree Service

W. Tod Miller

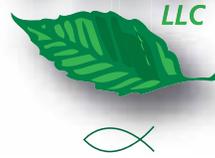
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**Construction
Damage
Prevention and Therapy**

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Adapted from Iowa State University Cooperative Extension Service
Valuable trees are often cut down, killed or severely damaged during construction work when simple, inexpensive care would keep them alive and healthy. Even worse, people sometimes go to a great deal of time, trouble and expense to try and save trees, only to have them decline and die after construction work is finished.

How Valuable is a Tree?

A tree's value depends on whether it is used for lumber, pulpwood, firewood or shade. Shade and ornamental trees are worth a great deal more than trees cut for lumber.

If planted by a nursery, an oak tree with an 8-inch trunk could cost several thousand dollars. Smaller trees cost less, but the mortgage on a new house may be paid off before a small tree reaches maturity. It is usually cheaper and easier to save trees than replace them. However, you can waste a lot of time and money trying to save the wrong trees the wrong way.

Deciding Which Trees to Save

This Fact Sheet, prepared by Sherdec's experts, will help you think about which trees to save. It shows simple reliable methods that will keep trees safe from construction work. Have a Sherdec Arborist help you identify trees and judge their condition and suitability for saving. A Sherdec Arborist will also be able to help you with placing the footprint of your new home. The following items will be helpful to you for marking the site:

- A complete set of building plans, including proposed utility routes.
- Twine or string to mark out the building, roads, parking areas and utility routes.
- Stakes (3 feet long builders lathe works well)
- 100' measuring tape
- Surveyor's flagging tape or brightly colored strips of cloth to mark stakes and especially valuable trees.

Using the stakes, string, and flagging tape, accurately mark out the proposed location of the building, its road and driveways, and all known utility lines.

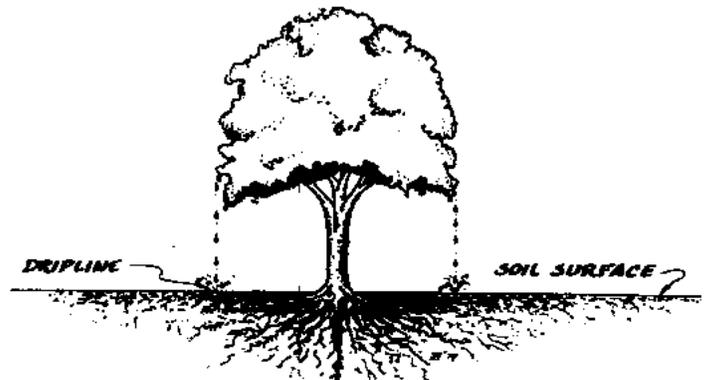
Look carefully at the proposed utility routes. Even a very shallow trench for a telephone line can kill a tree.

Consider the location of all cuts and fills. A simple rule is "Whatever is touched by either a cut or fill is killed."

After marking out the building, stand back and look over the site. Quite often a small shift in position of the building, a change in road or drive location, or even a change on a proposed utility line could make the difference between saving or cutting a valuable tree. A building does not automatically have to be located right in the exact center of a lot. Moving the building only a few feet in one direction can make it easy to save a tree. Now, decide which trees are worth saving or could be saved with little effort. If you make a wise decision now, the selected trees will be safe.

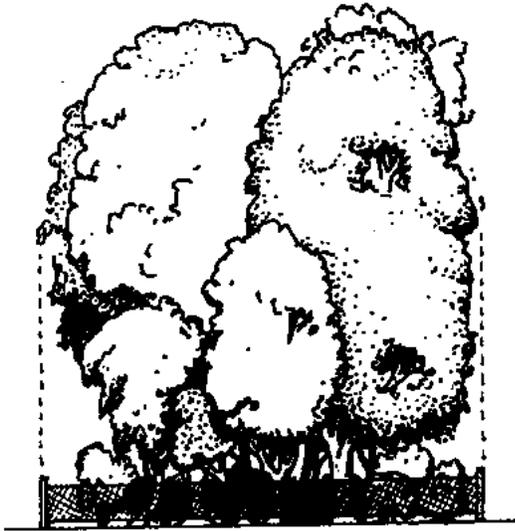
Saving Trees: Protect the Root Zone

There is as much tree underground as above ground. The underground roots are much more delicate than the trunk, branches, or leaves. Since they can't be seen, they are often hurt. Root damage within the dripline are critical. If the area is protected, the root zone is not likely to be damaged by construction equipment. Keep all construction activities outside the dropline of trees to be saved, using bright fencing placed around the tree at the dropline.



The total volume of the underground roots equals the volume of trunk, branches, twigs and leaves combined. However the most important roots are inside the dripline.

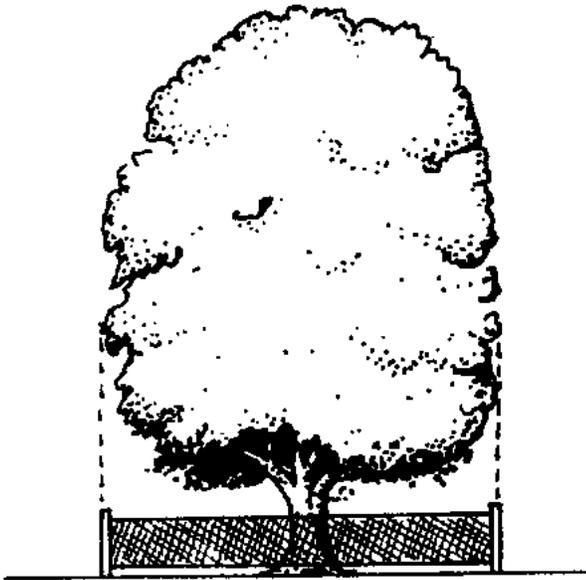
The Mini-Forest



Saving groups of trees is easier than individual trees. Build a fence around the "mini-forest" at the dripline of the outside trees. The fence keeps construction machinery away from the root zone. And, it's easier for people to work outside the clearly fenced area, rather than trying to dodge individual trees.

The mini-forest includes a group of trees protected from construction activities by a barrier fence at the dripline of the outside trees.

The Super Tree



Sometimes an individual tree, although isolated from the others, is still worth saving. Place a fence around the dripline of this tree.

This super tree is protected from construction activities by a fence at the dripline.

Declare Fenced Areas "Off Limits"

After valuable trees are safely fenced, leave them alone. Nothing is to be raked, cut, planted, stored or

disturbed inside the fence. Be sure all workers and visitors to the site understand that no one is to enter the fenced areas for any reason. Remove the protective fences only after all construction work has been finished, including final grading and smoothing of the site.

Carefully Remove Unwanted Trees

Be careful about removing unwanted trees. A tree being removed has the potential to fall and injure one of the trees you are saving. If possible, remove unwanted trees when they are dormant. This is especially important in heavily wooded areas. Do not perform any tree work near oaks in May, June, or July. Any final, minor grading and smoothing around the trees including removal of unwanted small trees and brush should be done by hand.

Handling Grade Changes

Change in grade, cutting banks next to trees, or piling dirt close to them is almost always a sentence of slow death for a tree. However, saving a tree may still be possible if you are willing to spend the time and money to do it. Talk to a Sherdec Arborist for more information. In all cases whether either cutting or filling around the roots of a tree is considered, seek advice from a Sherdec expert before you decide and proceed. Filling around a tree smothers roots. Even four inches of fill over the root zone may suffocate a tree. In general, tree wells do not help. Death from filling sometimes takes between 3 and 5 years.

Diagnosing Construction Damage

The first symptoms are usually a slight wilting and shedding of some leaves shortly after disturbance. In later years, leaf dwarfing, dying of twigs and in the case of conifers, excessive dropping of needles occurs. Early fall color or leaf drop, and slow spring growth are symptoms of a tree in decline.

If soil compaction does occur, aeration of the soil may help in re-establishing conditions necessary for good root growth. Please refer to Sherdec Tree Service act Sheet on Root Regeneration. Remember, "Prevention is the best medicine."

Pruning Related to Disturbance

Pruning live wood before, during or immediate after disturbance of the soil is not advised. If die back begins to occur, then remove the dead wood in the dormant season.

This is important to the health of the tree. The amount of stress occurring at the time of disturbance is great enough without the added injury of poor pruning. Reducing leaf surface area further reduces the tree's ability to efficiently manufacture needed energy. Please refer to Sherdec Tree Service Fact Sheet on Pruning Dosage and Proper Pruning Techniques.