

# Forest Facts

## Talking Trees with Your Contractor before You Build

The largest single physical impact to trees within our urban forest occurs during the process of modifying the human environment, or more simply put, building something. Significant changes in a tree's soil, water, energy, and biological resources can occur in this process.

Carmel-by-the-Sea's Urban Forest is one of the unifying elements of the community. Most lots have trees that are owned by individual property owners, but these individual trees are part of the larger forest that is enjoyed and appreciated by all. Tree-generated values impact psychological, social and biological aspects of daily life. Trees also add tremendous monetary value to the site on which they grow.

If you are planning to modify your human environment, it is critical to the health of the trees on your site to communicate with your architect and contractor the care that must be employed regarding tree health and safety to ensure that the work to be done does not upset the balance needed for the trees' survival. In this way you can avoid the disappointment and cost associated with having to remove a dead or unsafe tree once the project is complete.

Following are some tips for avoiding tree damage during construction:

### Soil Compaction

What happens below the ground is more important than what meets the eye above ground. The key to tree survival in the years following construction is protection of the roots *during* construction. This is probably the most insidious problem because the results of compaction cutting off air and water passages in the soil show up slowly. When barriers are not possible to keep away vehicles and foot traffic, other protective methods that can be used include: spreading several inches of wood chips; pumping concrete from the truck through conveyor pipes instead of driving over root systems; and bridging root areas with plates of steel.

### Severing Roots

Some cutting of roots near construction is inevitable, but much is avoidable. For example, the routing of underground utilities does not have to follow a straight line from street to house. Careful route selection can often avoid important trees. When that is not possible, tunneling is a good way to reduce damage. To reduce trenching for foundations, posts and pillars can be substituted for footers and walls.

### Drainage Changes

If terrain is altered, there will be a change in how water drains from the land. If flows are created that add too much moisture to a wooded site, a drainage system may be needed to maintain the previous amount of moisture (which provided the natural growing conditions for the existing trees). Similarly, existing trees along the edge of a new pond may eventually die from their roots suffocating. On sites *deprived* of water, irrigation may be needed to maintain existing trees.

### Soil Chemistry

Poisoning or otherwise altering the soil can result in weakened trees, making them more susceptible to insects and disease. In some cases, trees can be killed outright within a few years after construction. To prevent adverse effects on soil chemistry:

- Spread a heavy plastic tarp where concrete is to be mixed or sheet rock will be cut. The alkalinity of these materials can change the soil pH.
- Read labels. Do not use wood products containing pentachlorophenol. These are deadly to roots. CCA-treated timber (greenish color) is a safer alternative.
- Paint brushes and tools should not be cleaned over tree roots.
- Chemical wastes (paint thinner, etc.) should be disposed of properly and not drained on site. Local sanitary authorities can advise on recommended disposal methods.

There are many techniques that will help save trees during construction, but this is only one part of the challenge. The key to success is communication. It begins with the property owner making it very clear to the architect that mature trees on the lot are just as important as the size of the kitchen. In fact, you may want to seek out an architect who has interest and experience designing with trees in mind.

Most importantly, communication with the actual builder is essential. Many builders sympathize with the need to save trees, but often they view it as too time-consuming or otherwise costly. Still others may not know as much about tree-saving techniques as you do, so there is an education challenge.

Finally, there are the dozer operator, truck drivers, painters, masons, and a small army of others who are on the site daily. While it is usually not possible to work with each one or even visit the site daily, it is possible to convince contractors and foremen that you are serious in your desire to save trees and that they need to relay this concern to their workers.