

Remodeling Can Put Trees In Tight Spot; Arborists Can Help Owners Preserve Valuable Assets; [FINAL Edition]

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Full Text (1399 words)

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I'm not hung up on having a pristine house, but I was desperate for a family room. It drove me crazy to have the TV in the living room, along with the toys and video game paraphernalia that made the floor a permanent obstacle course.

I also wanted a third bedroom on the second floor. My daughter's bedroom is upstairs, and my son's room was off the kitchen, which meant I was trudging upstairs and down at bedtime, handling last-minute questions and making sure that neither child had started reading again while I was with the other.

Lots of people often solve such dilemmas by adding on to the back of their houses. But behind our house - 7 feet, 9 inches from the back wall, to be precise - towers a healthy oak that provides much needed summer shade. We can't imagine our yard without that tree. And to the side is a white ash my husband planted when we were still dating.

How to Hire an Arborist

Hiring an arborist is like choosing any other vendor, which means:

- Get two or three bids.
- Ask about training, certifications and licenses.
- Make sure the arborist or company has insurance.
- Ask for references.
- Talk with the arborists enough to tell whether they follow current practice, such as not topping trees and not using tree spikes on trees to be preserved.
- Look in the yellow pages, ask neighbors and friends, or go online to The American Society of Consulting Arborists (www.asca-consultants.org) and the International Society of Arboriculture (www.isa-arbor.com).

~ Lois M. Baron

If trees are healthy, desirable species, such as oaks or maples, odds are most homeowners would want to preserve them. Trees offer shade in summer and windbreaks in winter, which help lower home heating and cooling costs. They reduce erosion. They improve air quality by filtering out the dust and pollution that reaches the ground and exchanging carbon dioxide and oxygen.

A landscaped home also commands a higher price than a barren lot - as much as 15 percent more, according to the National Association of Home Builders. And trees, especially handsome mature specimens, look great around a house.

Some municipalities require that homeowners preserve trees when possible. Takoma Park and Arlington County are among those with tree ordinances protecting urban tree cover.

In our case, we decided to push out the back wall of our Arlington house by three feet, to support another bedroom upstairs over a roomier kitchen. We stressed to our builder repeatedly that we wanted the oak protected.

After our builder consulted a tree expert, our kitchen bump-out was set on piers, rather than on a solid foundation; we did not mess with the original foundation. The holes for the piers were dug by hand and were unevenly spaced to avoid damaging large roots. A beam was doubled up to compensate for the uneven spacing.

"About half of all our projects end up involving trying to save trees, so we consult frequently with a tree guy," said Chris Neumann of Encompass Design/Build in Vienna, who handled our addition.

The first step for homeowners planning to remodel is deciding which trees to save. Ideally, an arborist should be consulted before the design work has even begun, to make sure nearby trees are healthy and located where they will thrive.

Arborists specialize in the art, science, technology and business of tree care. Their fees vary according to how many trees must be examined, how complicated a plan is, and whether on-site visits will be necessary to care for the trees during the renovation. A consultation, usually applied to any work done, can run around \$200.

An arborist can devise a plan for getting nearby trees through the stress of construction. Ideally the builder will be brought into the conversation early on as well, so he can direct workers appropriately.

Lew Bloch, certified arborist and president of Bloch Consulting Group LLC in Potomac, outlines three key things to be avoided during construction: cutting roots, compacting soil and damaging tree bark.

“If there are too many root cuts,” Bloch said, “a tree dies because its roots can’t do their job of absorbing water and nutrients.” Roots also serve as anchors; cutting too many can cause the tree to fall. A basic guideline - which should be adapted for different species and types of soil -- is that cutting more than 30 percent of a tree’s roots is likely to cause problems, Bloch said.

A tree’s root system is much closer to the surface and much wider than many people realize. Furthermore, Bloch said, “the root system is not necessarily symmetrical” because roots will reach for open ground, rather than grow under the existing house or driveway.

For an additional fee, new high-tech equipment can be called in to X-ray a tree’s root system.

Building a new foundation by digging a continuous trench through a tree’s roots is asking for trouble, Bloch said. “A better methodology is to insert piers through the root system and then bridge those with steel I-beams.”

Compacting the soil around a tree squishes out the air pockets that a tree uses to get oxygen and cuts down on how much water can be absorbed.

Yes, a bulldozer will compact soil. Yes, a big pile of construction material can flatten out those air pockets.

Adding wood chips as a protective layer during construction can help, but grading a property and adding topsoil around a tree is a no-no. “No more than two inches of soil should go over a tree’s root system,” Bloch said -- and then preferably over the smallest area possible.

If a sidewalk or drive must be installed over a root zone, think about using brick, gravel or crushed stone instead of asphalt, advise Paul R. Fiset and Dennis Ryan of the University of Massachusetts at Amherst in an article reprinted by Mid-Atlantic Builder at www.homebuilders.org.

Nicking a tree’s bark is much like getting a cut in your skin. It opens the tree to infection and insect damage. For a tree, skip the bandage, but clear the injury of loose bark and wood.

The South Carolina Forestry Commission (www.state.sc.us/forest/refcons.htm) suggests these steps to protect trees during remodeling:

Mark trees to be saved with surveyor’s flagging or ribbon.

Build barricades of wood or wire around trees as far out as the branch spread of the trees. At a minimum, the barricade should be at least a foot from the tree for each one-inch of diameter of the tree trunk. (Example: If a tree is 10 inches in diameter, the barricade should be at least 10 feet from the trunk.)

Place a tree protection clause in the construction contract forbidding grading, filling, ditching, equipment parking or material storage within the tree protection zone. Outline penalties for violations and damage to trees.

If an underground line must go near a tree, require the contractor to tunnel or auger underneath major roots without cutting them.

Designate one corridor for access to the site -- preferably where the driveway or parking will be.

Keep construction equipment, material storage, fuel tanks, chemical or cement rinsing and vehicle parking away from the tree protection zone. Bloch mentioned two other things that might seem like good ideas - but aren't.

"Once a tree is in stress, it is not good to fertilize," he said. "The other thing people do is some pruning to compensate for root loss. This is the absolutely wrong thing to do."

He said, "The tree creates its energy by way of its foliage. If it's in stress or the more leaves are cut out, the less energy it can make. Leave as much foliage as possible."

It may not be immediately clear whether your efforts have paid off. A tree with compacted roots can take years to die. A damaged tree may succumb later to a secondary ailment, such as insect infestation, that it otherwise might have handled. One warning sign is foliage that is smaller, lighter and paler than normal, said Bloch.

"From my experience the only way you know if you have saved a tree is when you failed," Takoma Park resident Suzanne Berry said in an e-mail. "Thirty years ago, my husband and I purchased a house with 10 or 12 trees on the 1/2-acre lot. In the intervening years, we have had all but one of them die from drought and construction-related trauma. Next door on one side, they built an addition that compromised the roots of three trees. Within five years, those trees had died and had to be removed."

On a positive note, she added, they were told that one of their trees would die within three years; it's still alive after 10. If the tree lives well into its average lifetime span, the planning and care will have been worth it.

As we enter the home stretch of our own remodeling project, I've got my fingers crossed for our two trees.

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