



TREE NEWS

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PRUNING TECHNIQUES—COMBINING ART & SCIENCE

Dr. Alex Shigo (the forefather of modern arboriculture) coined the phrase, “*pruning is one of the best things an arborist can do for a tree, but one of the worst things we can do to a tree.*” The crux of this statement is that pruning can be a double-edged sword; if done properly, we benefit trees through our pruning practices, but if done improperly, we create wounds that offer an opportunity for wood-decay fungi, insects, and the elements to invade.

Pruning is a blend of both art and science and when done correctly, pruning reduces conditions that contribute to tree vulnerabilities later in life—ultimately ensuring a stronger tree structure by guiding future growth, while also providing clearance around structures, roadways, and/or pathways.

Understanding the steps for making proper pruning cuts is essential for developing a strong and healthy canopy. When pruning, we are seeking to make proper arborist cuts back at the branch collar (just outside of the branch bark ridge—Figure 1). We aim to make cuts in this area because the branch collar is an area where actively compartmentalizing cells can compartmentalize (i.e., close) the wounds we make more quickly. We never want to make “flush cuts” (Figure 2), leave “nubs” on the tree (Figure 3), or allow the weight of the tree branch to hinge down, ultimately tearing the bark tissues (*Figure 4). To complete a proper arborist cut, we usually want to implement the three-cut method (*Figure 5)—with the first cut being an undercut approximately 12” out from the branch collar; from there, we will make a top cut that meets that first undercut; then, the final cut will be made at the branch collar.



Figure 1



Figure 2



Figure 3



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*To view Figures 4 and 5, visit <https://naturalresources.tennessee.edu/extension-urban-forestry/#treenews>

Young or newly planted trees have different pruning needs than mature trees, but both pruning types are often warranted for our landscape trees:

Newly Planted and Young Trees	Established Mature Trees
Structure Pruning is one of the most beneficial practices that we can do for newly planted trees; it should occur in year 2 or 3 after planting once the tree has acclimated to its site and is growing vigorously.	Maintenance Pruning can help maintain older, more mature trees; it should occur on an as-needed basis and major changes to the tree (e.g., large pruning cuts) should not occur during this time.
1. Remove the five Ds: damaged, dead, diseased, duplicate, or drooping branches.	1. Minimize pruning regimens to an “as needed” basis.
2. Establish a central leader and remove or subordinate any competing leaders.	2. Crown Cleaning: Remove any broken, damaged, or hazardous limbs.
3. Define your lowest permanent branch.	3. Crown Raising: Raising the canopy of a mature tree may be an on-going pruning technique to maintain views into and out of the property.
4. Maintain appropriate scaffold (lateral) branches that continue up the trunk as appropriate.	4. Crown Reduction: In some cases, this practice may be warranted—remove weight to help reduce the overall height and/or width of a tree’s branches.
5. Select and keep temporary branches along the trunk (reducing their size) to help develop trunk taper (these will be removed later in the life of the tree).	5. Tree Removal: Unfortunately, as a living organism, sometimes trees do need to be removed and replaced

Lastly, remember that all pruning should be done from the ground and not from a ladder. Using extendable pruning saws can increase your reach, but once your objectives are out of reach, it’s time call in an ISA Certified Arborist.

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