

## **Types of Pruning with Mature Trees**

### **Crown Cleaning**

Crown cleaning or cleaning out is the removal of dead, drying, diseased, crowded, weakly attached, and low-vigor branches and watersprouts from a tree crown.

### **Crown Thinning**

Crown thinning includes crown cleaning and the selective removal of branches to increase light penetration and air movement into the crown. Increased light and air stimulates and maintains interior foliage, which in turn improves branch taper and strength. Thinning the crown can emphasize the structural beauty of trunk and branches as well as improve the growth of plants beneath the tree by increasing light penetration. When thinning the crown of mature trees, seldom should more than one-third of the live foliage be removed. At least one-half of the foliage should be on branches that arise in the lower two-thirds of the trees. Likewise, when thinning laterals from a limb, an effort should be made to retain inner lateral branches and leave the same distribution of foliage along the branch. Trees and branches so pruned will have stress more evenly distributed throughout the tree or along a branch. An effort known as “lion’s-tailing” results from pruning out the inside lateral branches. Lion’s tailing, by removing all the inner foliage, displaces the weight to the ends of the branches and may result in sunburned branches, watersprouts, weakened branch structure and limb breakage.

### **Crown Reduction**

Crown reduction is used to reduce the height and/or spread of a tree. Thinning cuts are most effective in maintaining the structural integrity and natural form of a tree and in delaying the time when it will need to be pruned again. The lateral to which a branch or trunk is cut should be at least one-half the diameter of the cut being made.

### **Crown Restoration**

Crown restoration can improve the structure and appearance of trees that have been topped or severely pruned using heading cuts. One to three sprouts on main branch stubs should be selected to reform a more natural appearing crown. Selected vigorous sprouts may need to be thinned to lateral, or even headed, to control length growth in order to ensure adequate attachment for the size of the sprout. Restoration may require several prunings over a number of years.

### **Crown Raising**

Crown raising removes the lower branches of a tree in order to provide clearance for buildings, vehicles, pedestrians, and vistas. It is important that a tree have at least one-half of its foliage on branches that originate in the lower two-thirds of its crown to ensure a well-formed, tapered structure and to uniformly distribute stress within a tree. When pruning for view, it is preferable to develop “windows” through the foliage of the tree, rather than to severely raise or reduce the crown.