# Pruning Trees in the Municipal Environment

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Founder and President

For Trees Company Ltd   (with some material sourced from Dr. Ed Gilman, University of Florida, IFAS Extension)

Pruning can reduce storm damage! How?
By prescriptive and preventative structural pruning for young trees:
Set goals, determine cycle and dose, and execute your pruning plan.
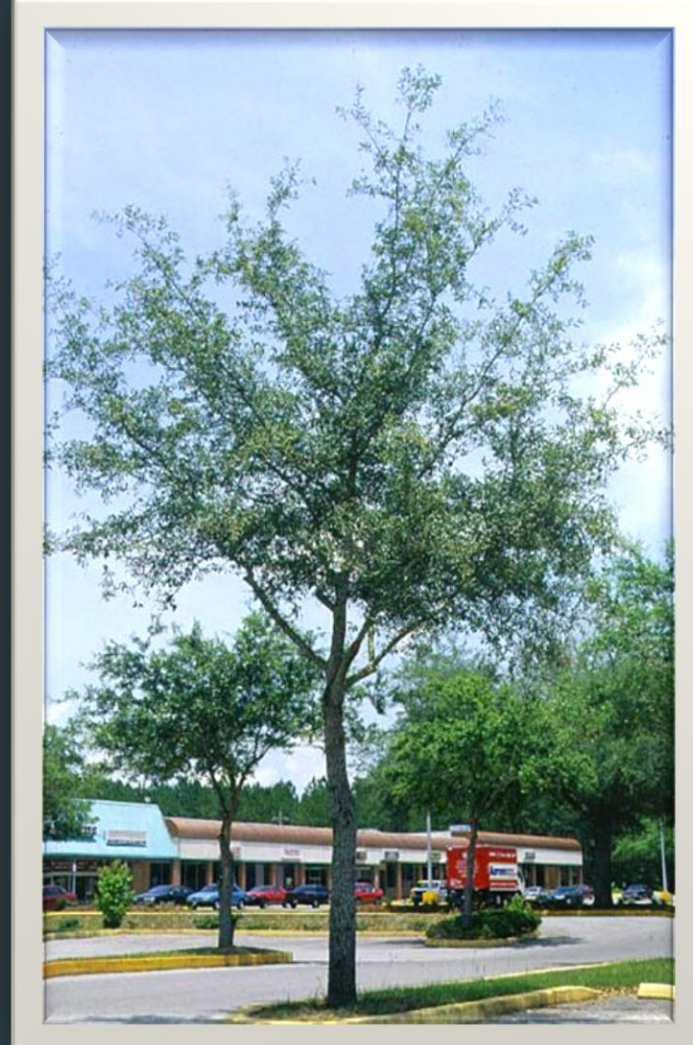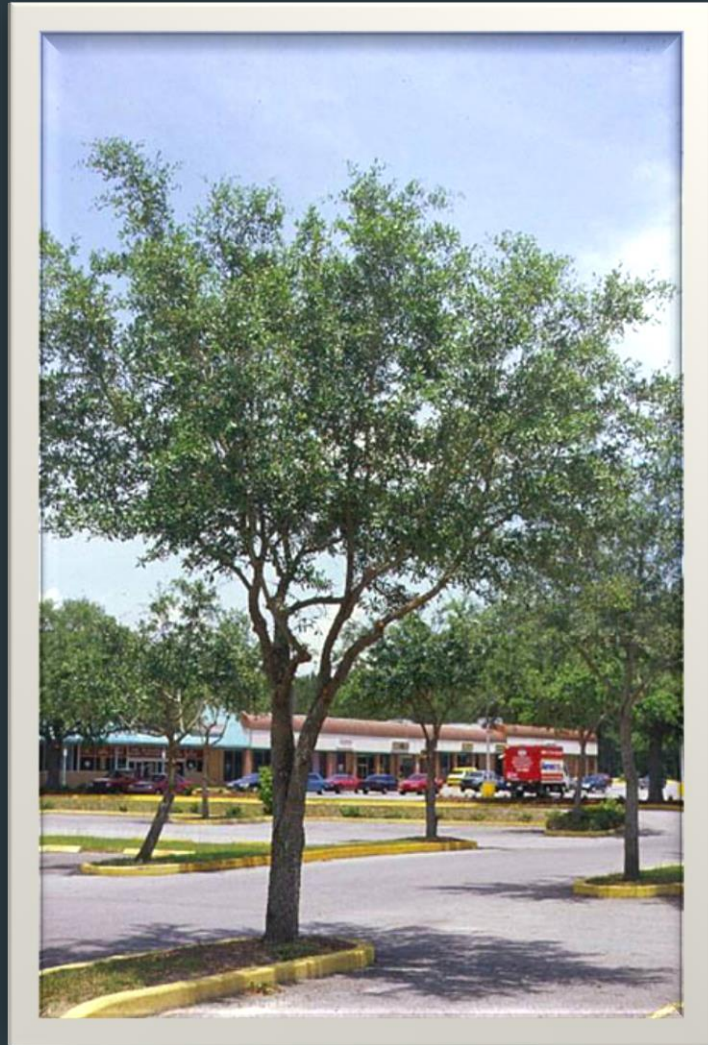
Principles of strong structure:
- **One dominant trunk**
- **Strong branch unions**
- **Balanced canopy**

Pruning Dose: How much? Pruning Cycle: How often? Pruning Schedule: when?

▶ For most species in Alberta, no more than 20-35% of LIVING branches should be pruned off at any one time.

▶ Every 9-12 months of GROWING season is a good cycle to follow, after the first pruning.

▶ Elm trees may only be pruned from October 1st to April 1st in Alberta

▶ Dormant season pruning is best for most species

▶ The objective of pruning young trees is to reduce structural issues that cause tree failure, maximizing the useful life of the asset. Look out for co-dominant stems, included bark, unbalanced canopy and large low branches.

▶ Always prune the "Demons of D" (Al Shigo) Dead, Damaged and Diseased branches

Elm trees: due to threat of Dutch Elm disease, only prune fro October 1st to April First. Pay attention to co-dominants, included bark and Canopy architecture.
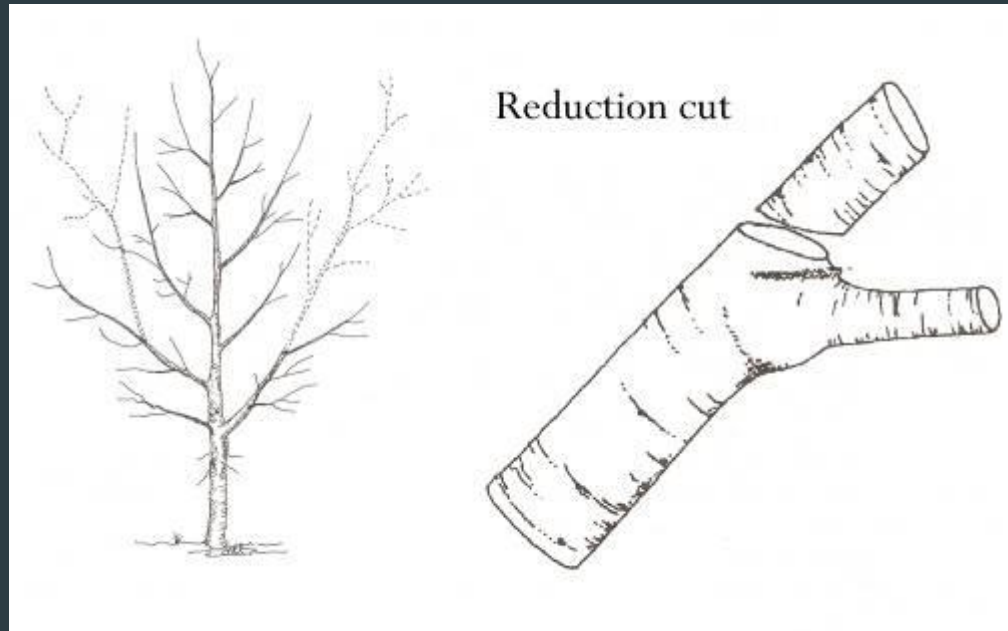
Avoid Co- dominant branches with included bark: leads to cracks and branch or worst case scenario, entire tree failure.
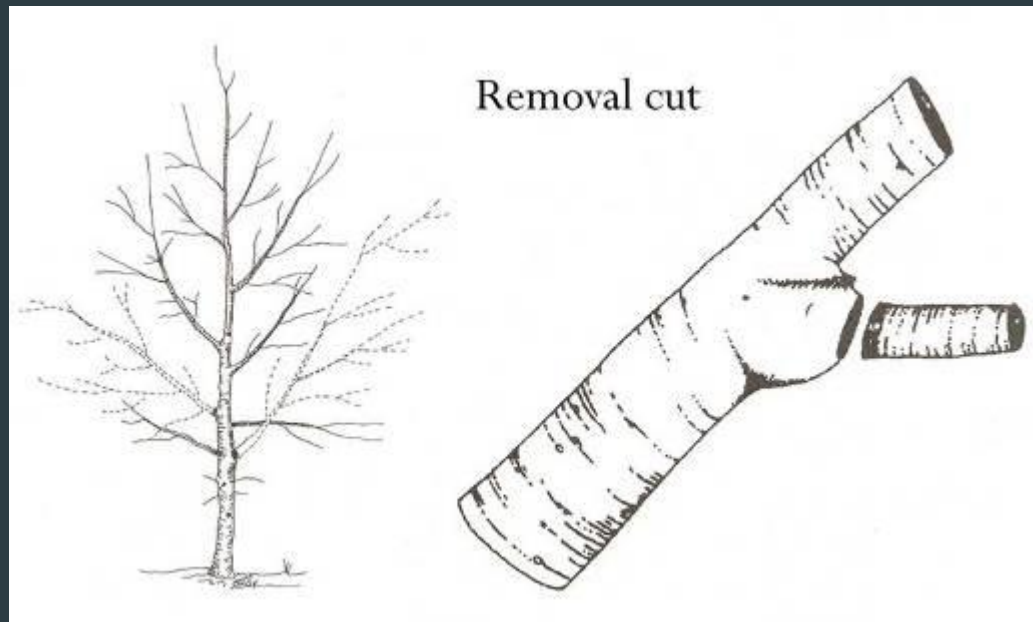
This tree blew apart due to a co-dominant that could have easily been pruned when the tree was younger.
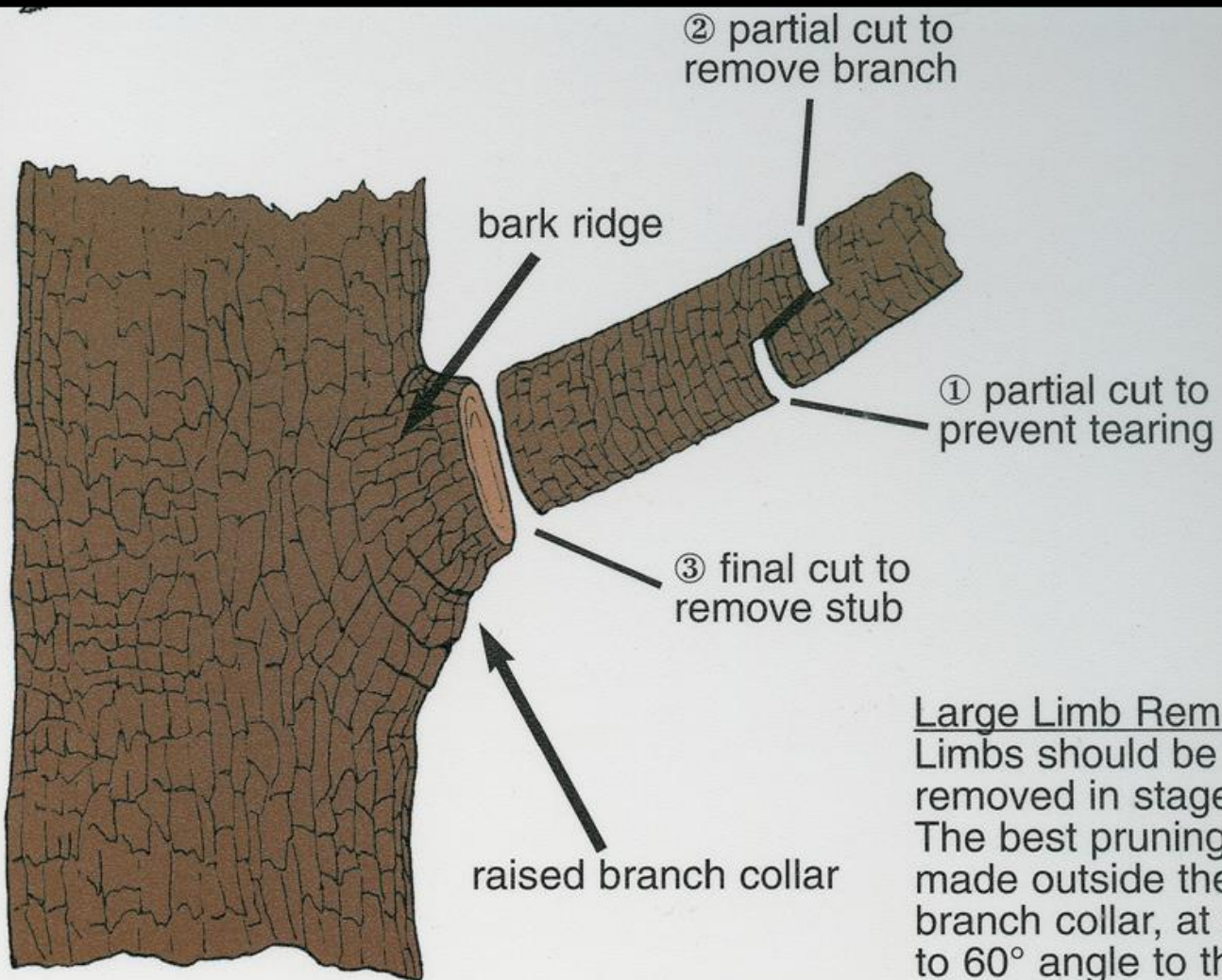
Types of pruning cuts:

Reduction cut

Removal cut

Reduction cut shortens the length of a stem by pruning back to a smaller limb.

Removal cut prunes a branch back to the trunk or parent branch.

② partial cut to remove branch

bark ridge

① partial cut to prevent tearing

③ final cut to remove stub

raised branch collar

Large Limb Removal: Limbs should be removed in stages. The best pruning cut is made outside the branch collar, at a 45° to 60° angle to the branch bark ridge.

Reprin

Seek a Strong Connection!

Collar
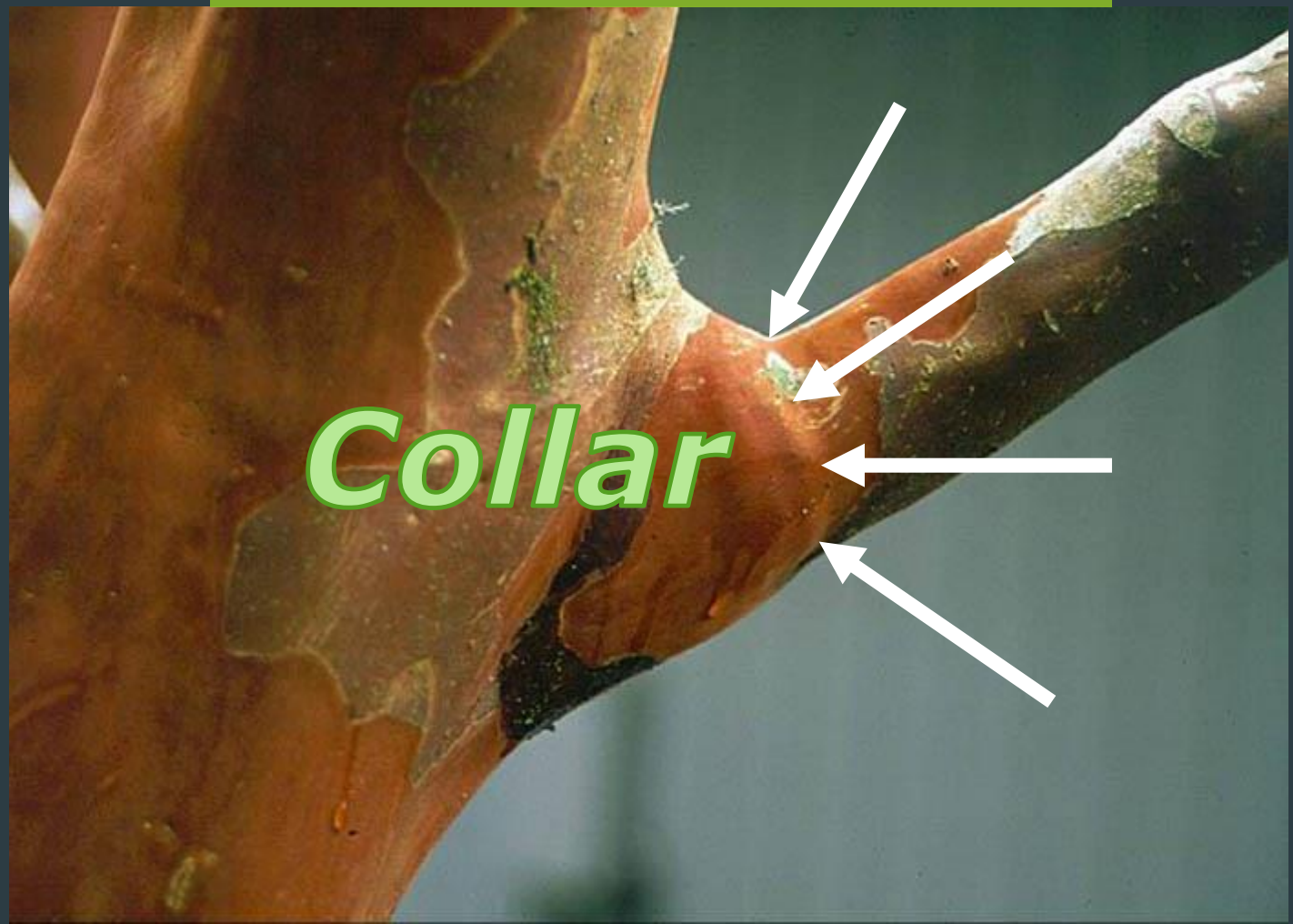
All large limbs located close to the ground will eventually have to be removed for clearance. Do this sooner rather than later in the life of your trees!

Do not: wait to prune low branches until they are massive!

As large, dinner plate sized wounds seldom seal over,
and often allow decay to enter .

Objective: _Prune to promote strong structure_. Most trees will require about six pruning sessions over 25 years to develop strong structure.

1. Develop or maintain a strong, central leader
2. Identify the lowest branch in the permanent canopy
3. Prevent branches below the permanent canopy from growing too large
4. Space branches along the main trunk evenly relative to eventual branch size
5. Keep all branches less than 50% of the trunk diameter
6. Suppress or subordinate branches or stems with included bark

# Recent street tree planting

All are temporary branches

Street

Curb
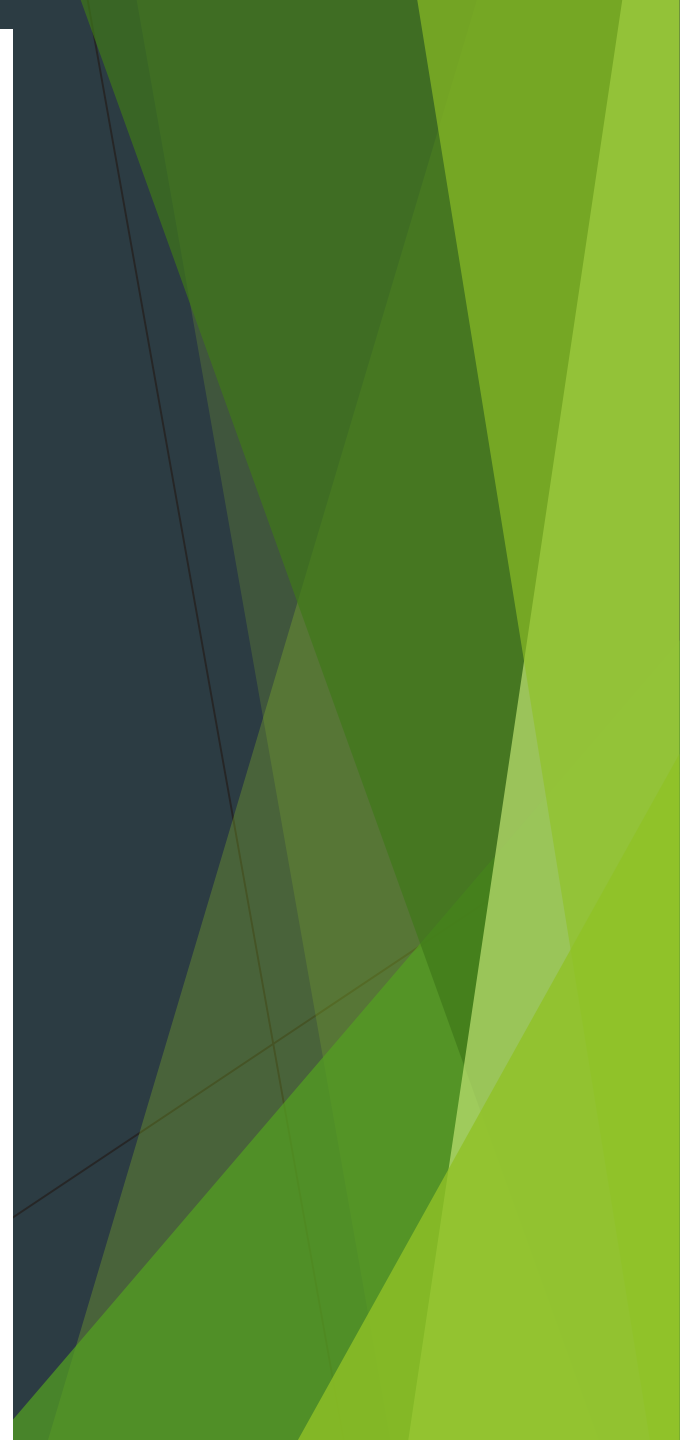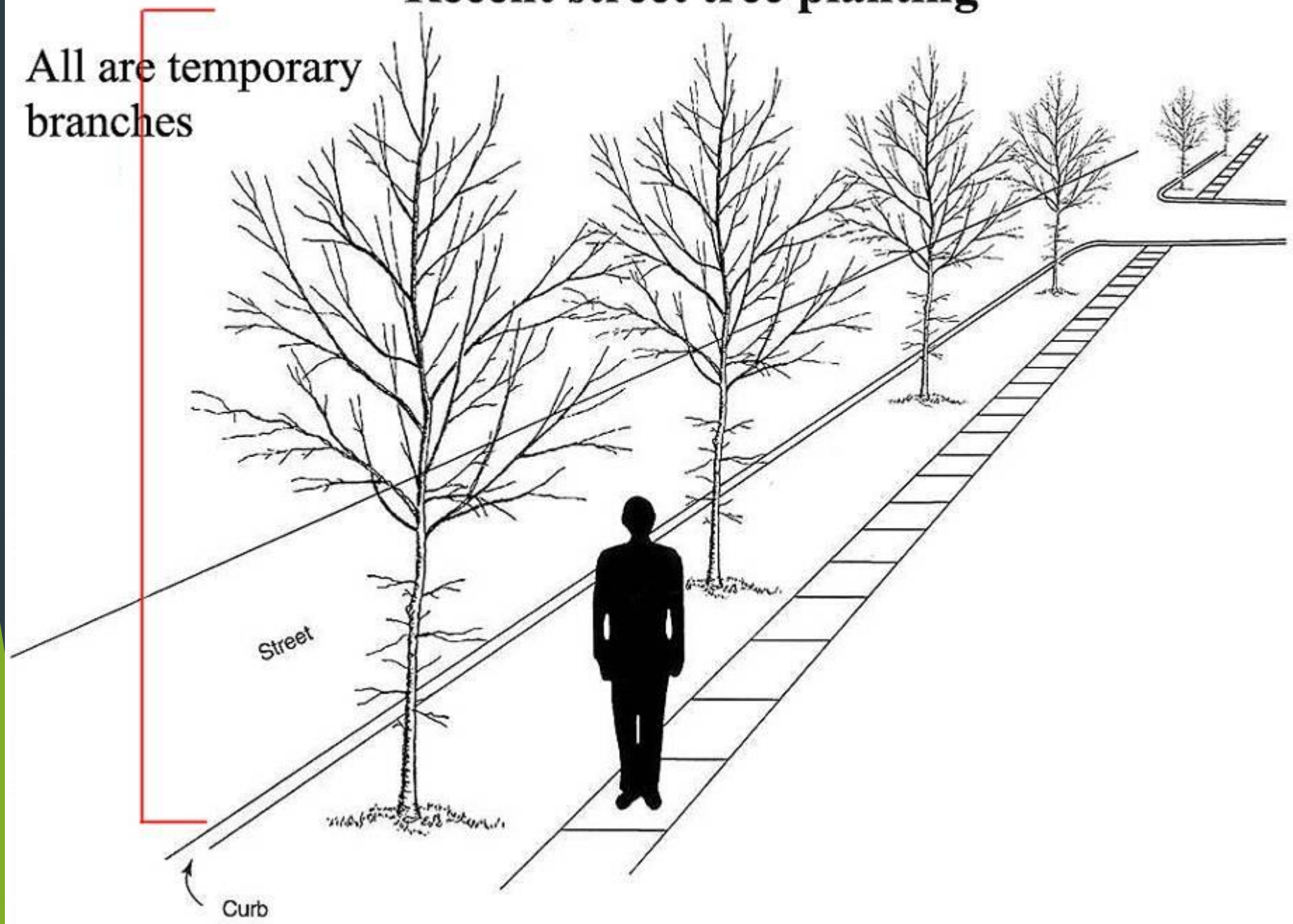
Plan your Pruning: The first 5-10 years

▶ Most branches will be temporary

▶ Avoid removing more than 20-35% of living foliage at any one session

▶ REDUCE all branches greater than 50% trunk diameter

▶ REDUCE and/or REMOVE all branches or stems competing with selected main trunk or leader

▶ REDUCE or REMOVE large, low or overly vigorous low hanging branches

▶ REMOVE broken cracked, or severely damaged branches (The Demons of "D")

Reduce growth rate of low aggressive branches
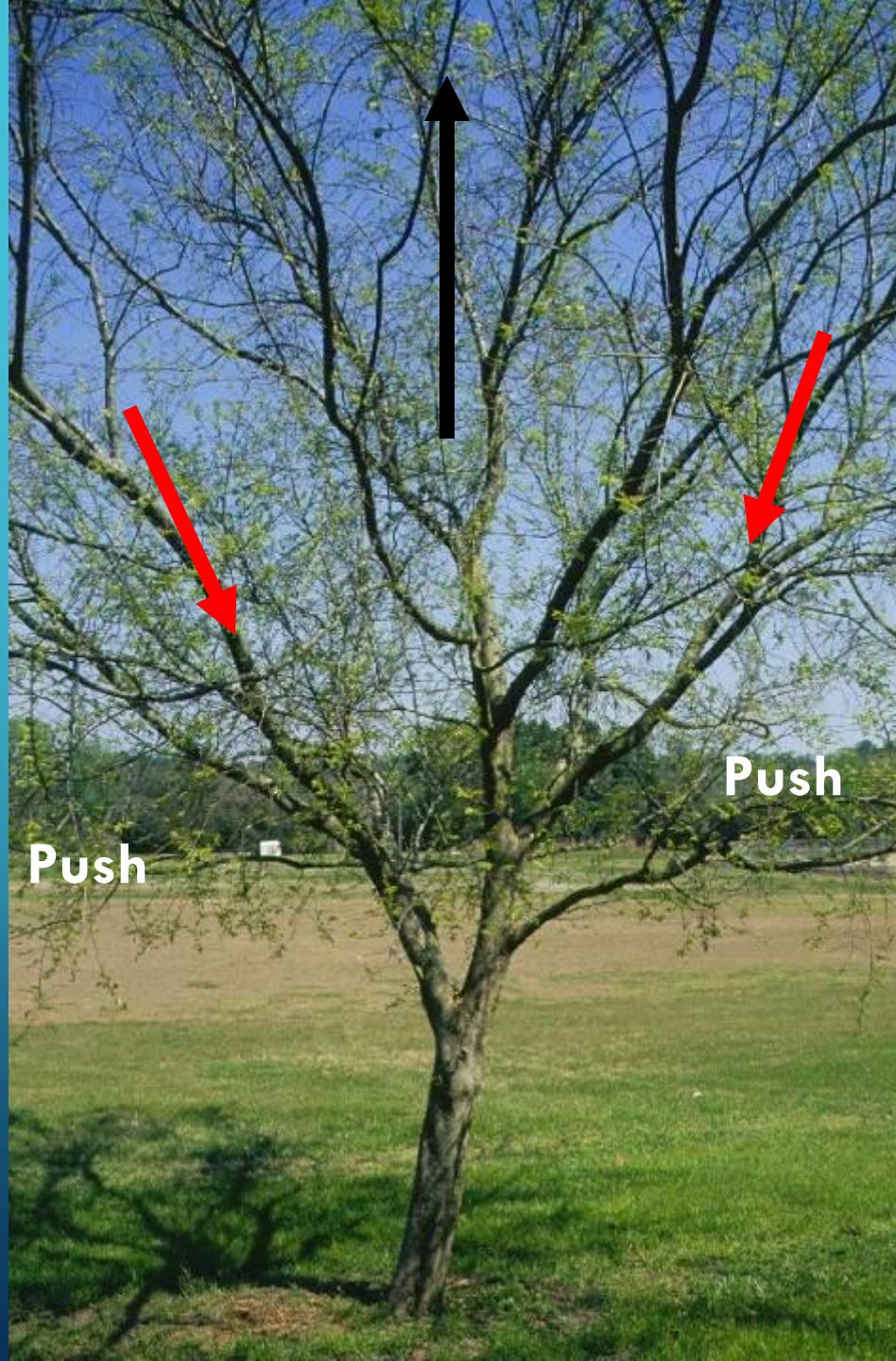
Keep branches less than half the trunk diameter

Shorten this branch
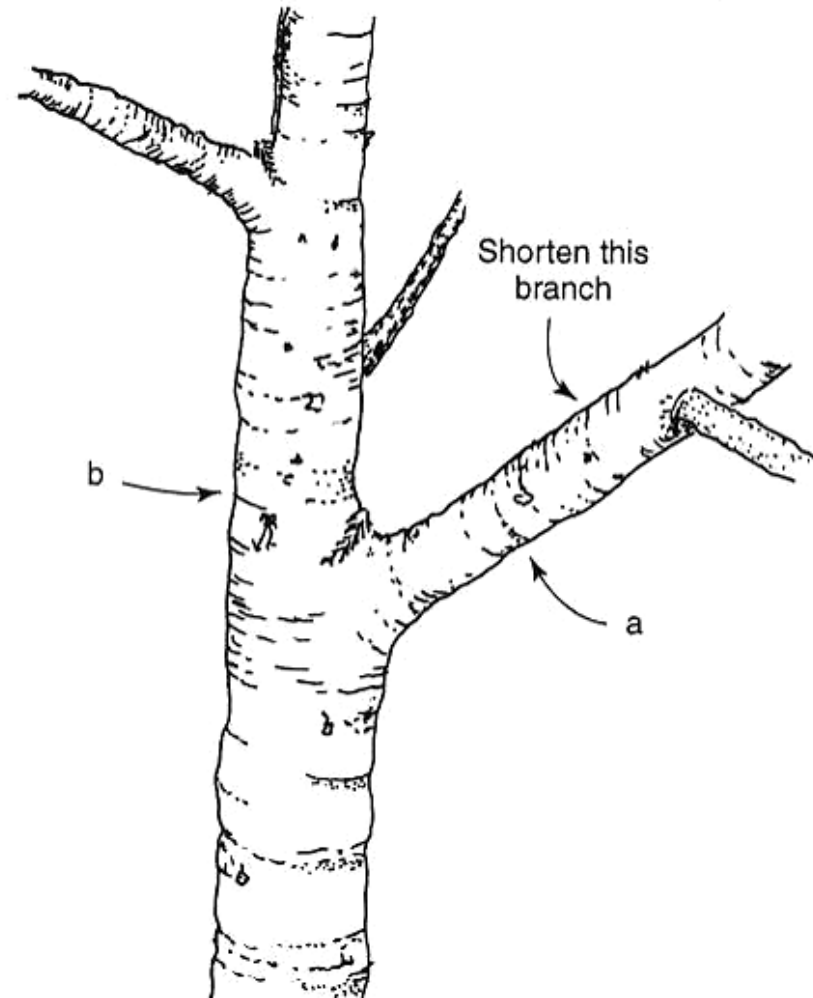
Before

Push
back

After

Year two

Don't wait until the architecture of your tree has grown far beyond the norm to schedule structural pruning!

Pruning Plan: 5 – 20 years

- Do not remove more than 20-35% of live foliage.

- Reduce all branches greater than 50% trunk diameter.

- Identify lowest scaffold limbs of the permanent canopy and reduce all aggressive lower branches.

- Reduce branches with included bark.

- Reduce or remove competing leaders (if there are more than 3 competing leaders, this can be done in stages).

- Reduce branches within 40cm of largest limbs.

BEFORE

AFTER

Push
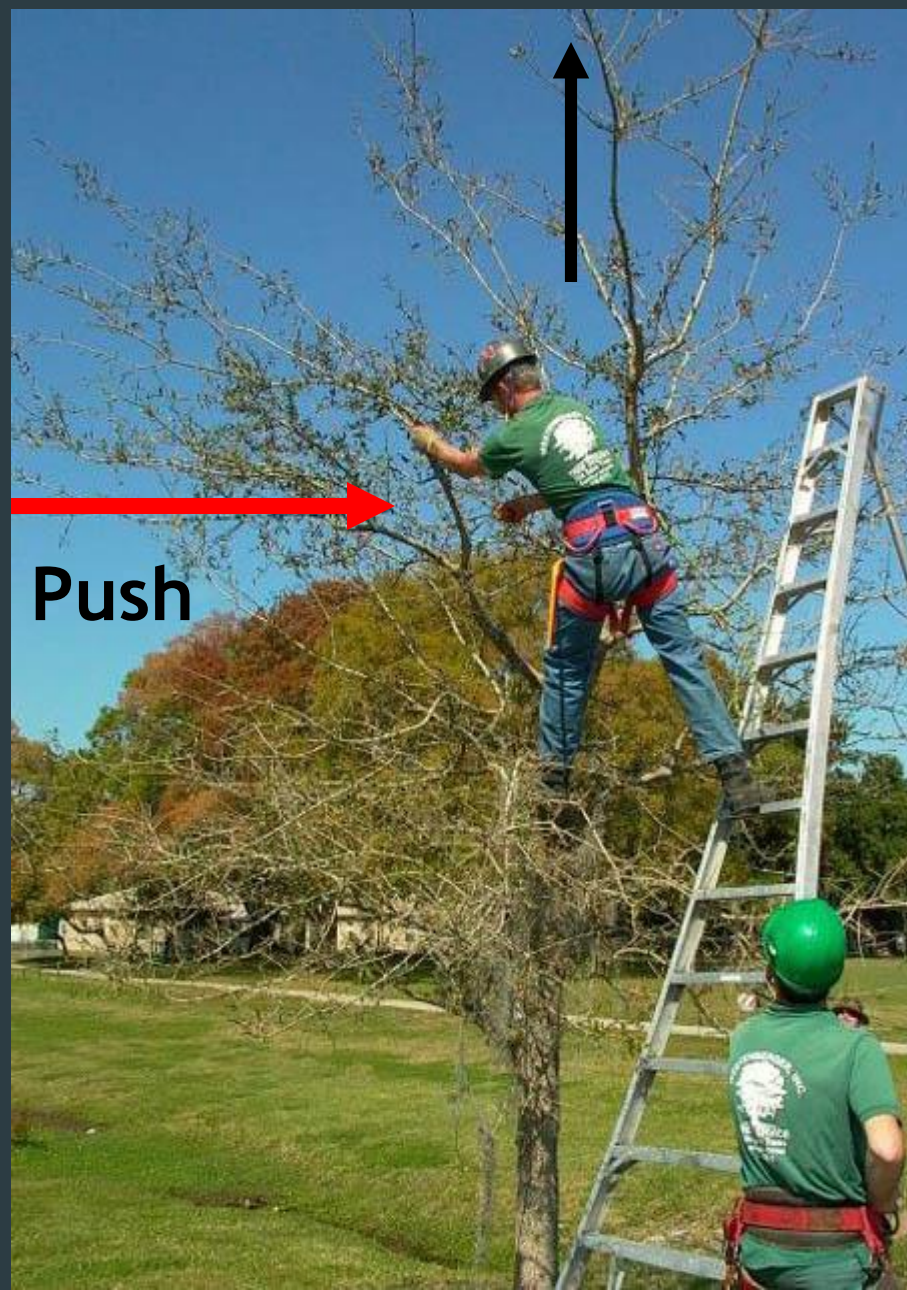
Two years and two prunings later, tree is starting to resemble the desired form.

Before

After

Pruning Plan: 20 – 30 years

Identify 5 to 10 permanent scaffold limbs and *reduce* branches within .45 m -1m to avoid clustered branches.
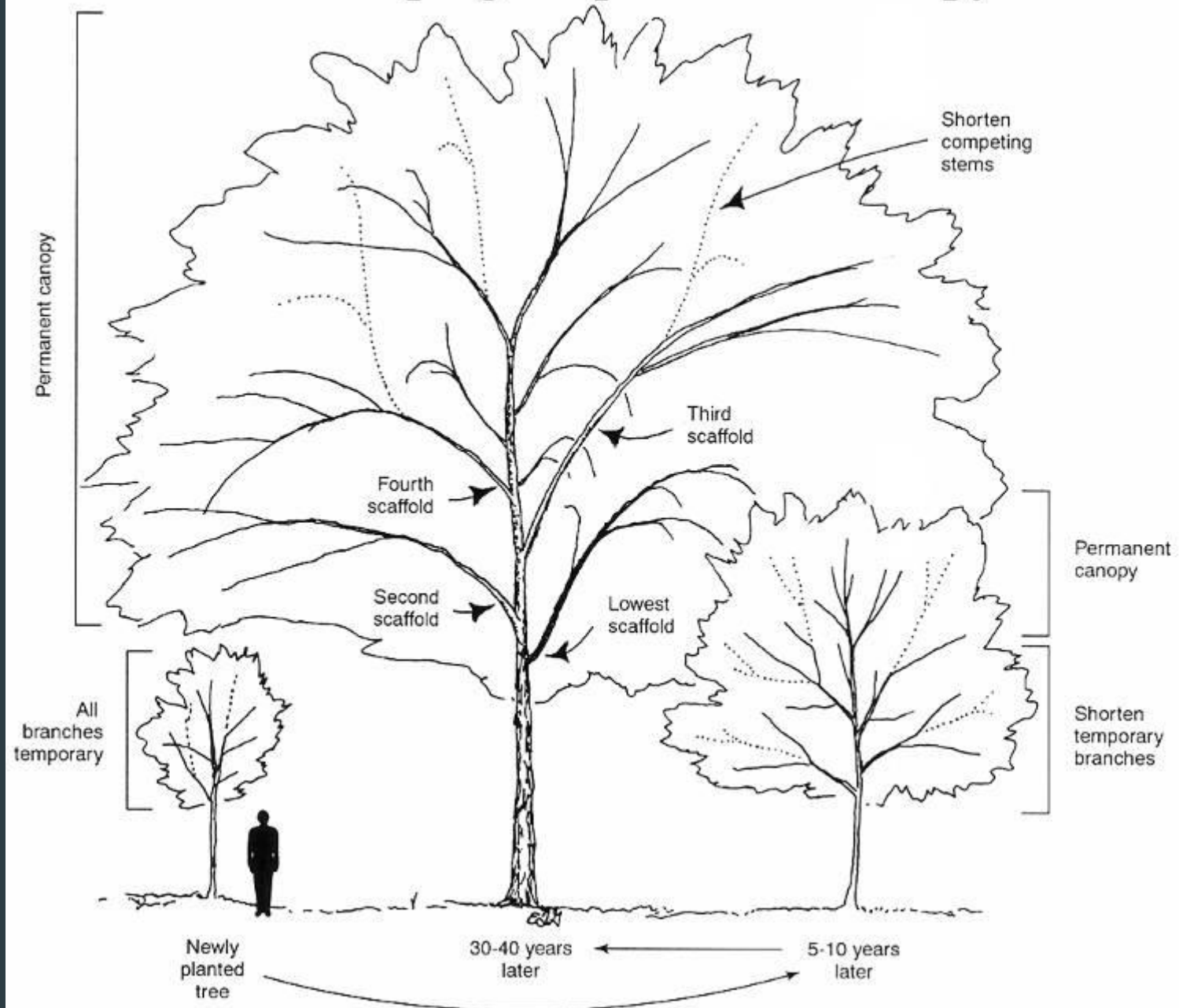
Space permanent scaffold limbs to reduce wind resistance.

Remove many or all of the branches below the first permanent limb.(by-laws vary, 4m-6m)

Reduce branches with included bark.

*Reduce and/or remove* competing leaders.

Developing the permanent canopy

Permanent canopy

Shorten competing stems

Third scaffold

Fourth scaffold

Second scaffold

Lowest scaffold

Permanent canopy

Shorten temporary branches

All branches temporary

Newly planted tree

30-40 years later

5-10 years later

Safety First!

Hiring contractors? What should you look for?
Certification, COR, *__Reputation__*, Insurance
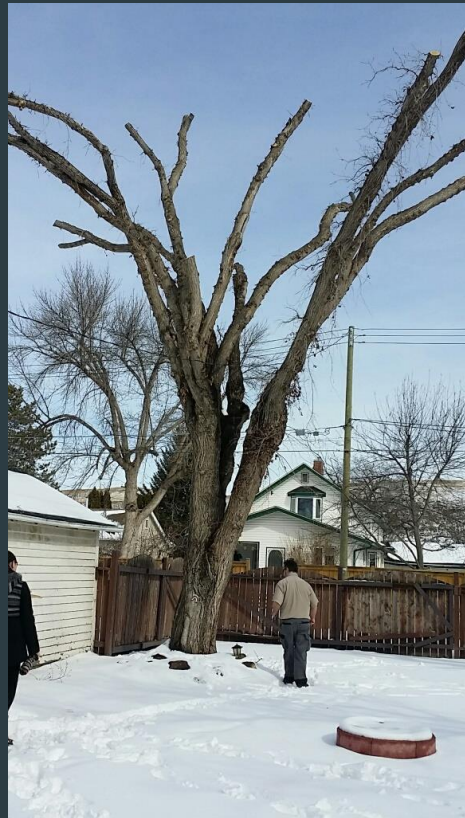
Remember: trees are number one!

- And the first things people see when they visit your community!