Horticultural decision making at North Campus

Factors taken into account regarding the need to remove or heavily prune trees

**Structural soundness** of tree: e.g. damage to main trunk, to major branches, to roots?

**Surroundings**: e.g. is tree next to a walk or property that is endangered by a falling branch or tree? Is the subject tree part of a grove or grouping such that its contribution is significant as a wind buffer, or as a match in an aesthetic composition? Are roots of plant holding up a bank or providing some other contribution beyond aesthetics?

**Tree health**: is whole plant involved or just a portion, would chemical controls be repeatedly needed to maintain plant, or could one treatment solve the problem (Colorado blue spruce aphid), is damage vector likely to spread.

**Significant unique qualities**: e.g. shape, flower, fall color, historic links, rarity, memorial or donor status, integral to curriculum.

**Other related issues**:

- site accessibility,
- shade/sun issues / is site too shaded to allow a new small plant to grow in the matured surroundings, or would removal lead to sun damage on neighboring plants,
- can the stump be left or need to be removed,
- can the replacement be started before removal of damaged plant,
- if the diseased or infested plant stays would the disease or the insects be liable to spread to other plants,

what zone of the campus is the plant located

- Zone 1: Core campus / higher standard for safety, health, and aesthetics
- Zone 2: Parking lots and drives / different safety issues including sight lines and visibility and different aesthetic issues such as matching sizes in rows of trees
- Zone 3: Greenbelt and natural areas / greater tolerance of natural conditions and a wilder aesthetic template
A current example: the Vine maple on the west side of the tower 3 elevator across from the Security Office.

The Problem: the main trunk has split due to age and to having grown as a weak, bark included, tree crotch.

Options:

- Do nothing and wait for tree to split further, endangering passing foot traffic or grounds staff working under tree.

- Bolt trunk together, requiring annual adjustment of large and multiple bolts, compromising health of tree and tree’s aesthetic contribution to landscape.

- Prune one half of split trunk out, resulting in radically off center structure and severe damage to tree health.
Remove and replace.

(-) Reduces aesthetic by removal of foliage and sculptural presence of tree.

(-,+): Reduces practical contribution to storm water mitigation, air quality and carbon sequestration.

  (-) Tree is 40-45 years old and has maxed sequestration service.
  (-) Air quality and storm water impacts at max for this plant.
  (-) Size is such that annual pruning has become more intrusive to maintain “fit, in tight space.”

(+): Removal presents opportunity to plant a more appropriate or more aesthetically interesting plant.

(+): Removal improves safety of area around this planting bed.

Our decision: To replace this structurally damaged tree with another maple that is expected to grow into a smaller tree. Depending on availability, to plant one of the many varieties of coral bark maples whose red new growth will provide additional interest to the typical fall foliage interest of most maples. The other choices would include the paper bark or copper bark maple, like the maples that grew in boxes on the stair climb in the construction zone of the CE&E building. We will site the new tree more centrally within the bed to counter the tree’s tendency to lean away from the building when planted, as the old tree was, within 5 feet of the tower wall.

In addition, we will plant two other trees in other areas of the campus, to reduce the time required to replace the storm water and air quality contributions of the maple that is being removed.