Damage Due to Large Prunes (Heading Cuts)
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The Sugar Maples on 6th Street, across from the Student Union Building are about 40-50 years old. These trees look relatively healthy, there seems to be no sign of drought stress on the plants as well as any insect problems (although I can be wrong it is fall and it is hard to make judgment calls without any leaves). However immediately it is not going to be insects who will endanger these trees, nor will it be the repaving damage done on 6th street, or paradise creek at there north side which is slowly receding the bank closer to the trees; but possibly their pruning cuts.

Each of these trees have had thinning cuts on their south sides, probably because of the increasingly heavy traffic on 6th Street. Although pruning can prevent limbs from growing into disastrous areas, pruning should occur when the limbs are fairly young. The tree in the foreground's limb was 45 cm in diameter or about 1 ½ feet. "Pruning opens tissue to decay organisms and opens tissue to insects and other pests."(Lloyd) This opened a tree wound of an area of 1990 square centimeters to decay organisms. Furthermore the thinning cut is actually a heading cut; the cut was not made at the branch collar but instead further out on the branch creating a stub. This has made it difficult for the tree to grow over this wound; as you can see in the picture the tree has barely grown over the wound which was made well over a year ago. In addition no undercut was made, thus when the branch fell it stripped bark right off the trunk.

Heading cuts of this size are however common with drop-crotching and toping which are considered by Cass Turnball as well as many arborists to be detrimental to tree health. (Turnball) According the Valuation of Hazard Trees in Urban Areas, If a hollow of a tree's circumference is half the trees circumference then the tree will be considered hazardous. Although the heading cut is not becoming hollow, the circumference of the cut is well over half the circumference of the tree, and if decay organisms should begin to hollow out this cut before the tree heals over it could become hazardous. To further point out, this heading cut is and will continue to girdle the south side of this tree until the cut is healed over.

It looks however that these trees are surviving at the moment, they are losing roots to paradise creek, bark form car interactions, and to top it all off they have had a reduction of carbon intake due to the loss of their limbs. At this point little can be done to help these trees. Pruning paint is ineffective; all that can be done, is to limit stress on these plants so that they can heal over. Metal tree guards can help protect the trunks, and even a rebuilding of the bank could save roots. The fact of the matter is that these limbs should have pruned when the tree was younger. It seems horrible that these trees have literally become monuments of decaying biomass. "At what point does the wounding done by pruning outweigh the benefits to the tree or the trees owner."(Turnball)

References

Lloyd, John. Lecture 18. 2003

Mathey and Clark. Valuation of Hazard Trees in Urban Areas. International Society of Arboriculture Press 1994

Turnball, Cass. "The Case against Drop Crotching" Tree Care Industry V. 24 #11, 2003