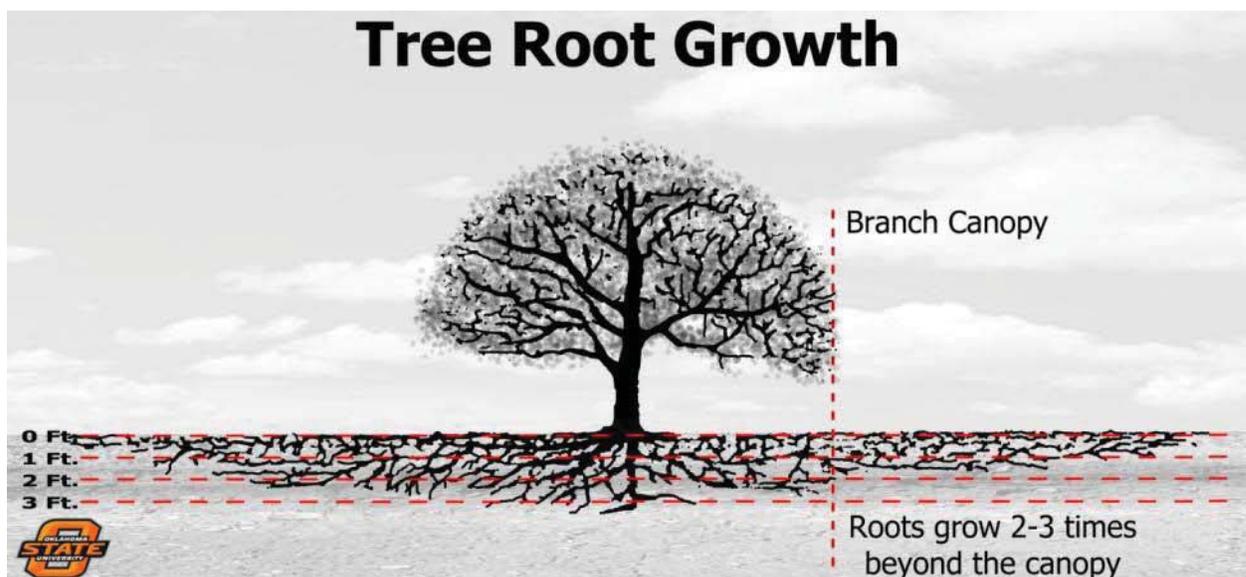


ATTACHMENT 1. PRE-CONSTRUCTION TRAINING FOR TREE PROTECTION
(OSU Tree Care Plan and Standards <http://fm.okstate.edu/landscape-services>)

- **Tree roots** are shallow.
- **Ninety percent** of the fine, water- and mineral-absorbing roots of a tree are in the upper six to twelve inches of soil. Piling soil over a root system or increasing a soil grade can smother roots. Cutting or removing too many roots is also harmful. (Figure 1)
- **Tree roots** are extensive and go 2 to 3 times past the canopy drip line. (Figure 1)
- **Soil compaction** caused by increased foot traffic and heavy machinery decreases soil oxygen and water pores, inhibiting root penetration and resulting in tree health decline.
- **Site clearing** by adding or grading away soil, damages tree roots causing lasting negative impacts even death.
- **Severed roots** even if it is just one major root can add up to a tree losing 5 to 20 percent of its entire root system.
- **Boring** when applicable in lieu of traditional trenches can save tree roots and help assure healthier, longer-lived trees in the landscape. (Figure 2)
- **Physical injury** to the trunk, limbs, and branches can lead to disease and decay. (Figure 3)
- **The ability to repair** construction damage to trees is ineffective. The single most important action OSU can take is tree protection.
- **Barriers** with fence panels will be constructed to keep tree roots and trunks protected. The area will be known as the “Tree Protection Root Zone”. The fence barriers must be installed as directed prior to any equipment arrival to the site. (Figure 4)
- **The fence** should be placed to allow for a protected root zone of 1 to 1.5 foot of space from the trunk for each inch of trunk diameter measured 4.5 ft. from the ground. A twelve-inch tree needs a twelve-foot diameter fenced off area around the trunk.
- **Construction personnel** must remain off limits in the fenced areas and keep the area clear of building materials, waste, excess soil, and porta potties. No trenching or other soil disturbances should be allowed in the fenced areas. The fence must not be moved during construction.
- **Construction site visits** will occur by Facilities Management’s Landscape Services staff to evaluate the tree protection efforts.
- **TREE Protection will be** strictly enforced as noted on the bid and contract documents. Work will be stopped and fines assessed should guidelines not be practiced or damage occurs.

FIGURE 1.



Trenching Vs Boring

FIGURE 2.

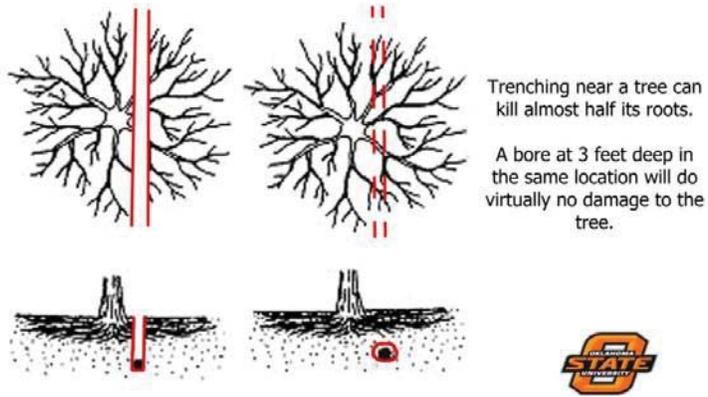


Figure 3.



Figure 4.

