LOGISTICS + DETAILS
- Prior to the construction phase, root invigoration, and root and branch pruning arrangements must be made for pre and post-construction care.
- “First Up, Last Down;” TPZs will be erected before construction, and removed when all machinery is off site.
- TPZs must remain in place. Materials, machinery and employees must stay outside of TPZs.
- If adjustments are necessary, there must be written permission from the Project Manager and Grounds Department.

LOCATION
- TPZs shall be established around all trees not slated for removal in the construction site.
- TPZs shall allow for necessary logistical function and storage of materials outside zone.
- TPZs shall extend to the drip line, or have a radius of 1.5 feet per inch diameter of the tree, whichever is larger.
- TPZ dimensions shall be noted explicitly on all plans.
- TPZs shall be inspected by Grounds prior to the beginning on construction, and its removal at project close.

MATERIALS
- Default fence type is 5-6 ft high chain link fencing. Other options are available through consultation with Duke Grounds.
- When TPZs are located downslope of construction or material storage, a silt fence must be included.
- The Warning Sign must be posted every 25ft.
- If brief entry in to the TPZ is required, use a root buffer to protect the roots from crushing and coordinate with the Grounds Department.
- If utility installation is required within TPZ, trenching and root pruning must be done by a certified arborist.
Do not purchase or install trees with two leaders, or remove one at planting. Do not prune tree at planting except for specific corrections, including broken and dead branches.

Do not stake trees except where specified by landscape architect. If staking is necessary, use two opposing stakes with separate flexible ties. Remove staking at end of first growing season.

3" (8 cm) bark mulch; do not place mulch in contact with tree trunk. Keep mulch 2" from tree trunk.

4" (10 cm) raised ring of soil to direct water into root ball - especially important if top of root ball is raised above grade.

Before planting, add 3-4" (7-10 cm) of well-composted leaves, recycled yard waste or other compost and mix into top 6" (15 cm) of prepared soil. Add compost at 20-35% by volume to backfill.

Do not stake trees except where specified by landscape architect. If staking is necessary, use two opposing stakes with separate flexible ties. Remove staking at end of first growing season.

3" (8 cm) bark mulch; do not place mulch in contact with tree trunk. Keep mulch 2" from tree trunk.

4" (10 cm) raised ring of soil to direct water into root ball - especially important if top of root ball is raised above grade.

Extend stakes into undisturbed soil.

4-6" (10-15 cm) deeper than root ball for lowered planting hole as needed with poor drainage.

Pack backfill soil around base of root ball to stabilize; allow rest of backfill to settle naturally or tamp lightly.

NOTES

1. Where several trees will be planted close together such that they will likely share root space, till in soil amendments to a depth of 4-6" (10-15 cm) over the entire area.

2. For container grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil, then cut or pull apart any roots circling the perimeter of the container.

3. During the design phase, confirm that water drains out of the soil; use lowered planting hole depth and design alternative drainage system as required.

4. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.

5. The planting process is similar for deciduous and evergreen trees.