

Duke UNIVERSITY

A015120

TREE PROTECTION ZONE

TREE PROTECTION ZONE (TPZ)



Tree roots grow like a dinner plate; shallow and close to the soil



If something seems out of place, or you have an idea for improvement, please bring it to the attention of the Project Manager.

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.

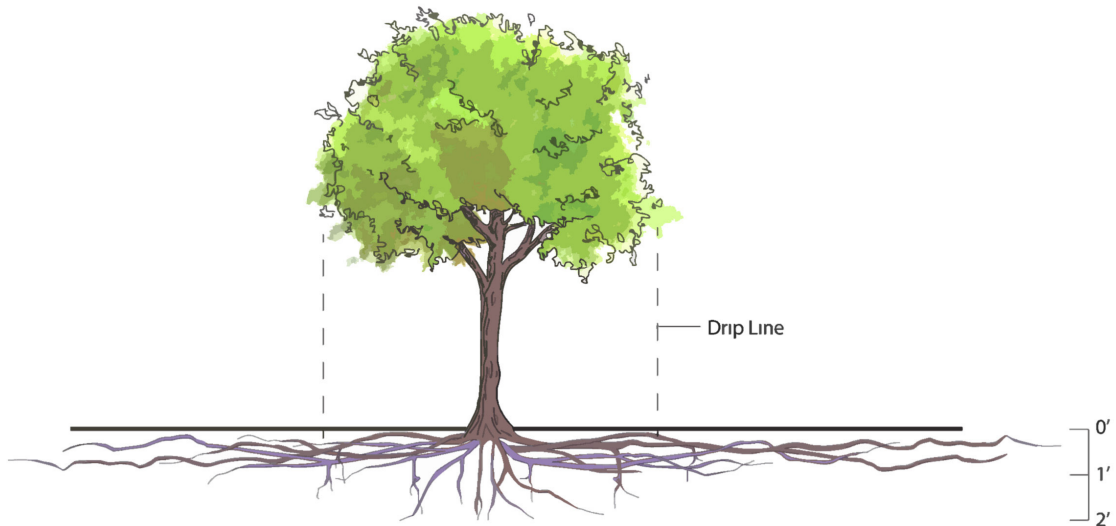
LOCATION

- 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.

TREE PLANTING AND ROOT STRUCTURE



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 wrap trunk; Mark the north side of the tree in the nursery and locate to the north in field.

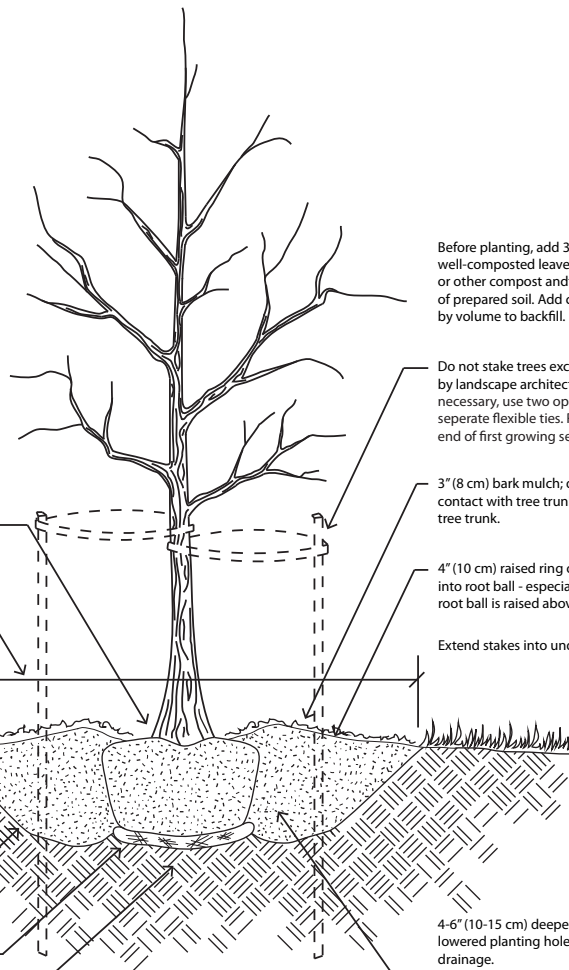
Trunk flare and top of root ball should be at grade in well drained soil, up to 4 inches (10 cm) above grade in poorly drained soils.

Note: Width of planting hole is 3 times root ball diameter in highly compacted or clay soil; 2 times the root ball diameter minimum in all others.

Dig wide planting hole with tapered sides*

Cut burlap, rope and wire basket away from top and sides of root ball. Uncovering at least 2/3 of rootball.

Set Ball on undisturbed soil to prevent settling.



Tree Planting Detail (B&B plants)

NOTES

- 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" (10-15cm) over the entire area.
- 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.
- During the design phase, confirm that water drains out of the soil; use lowered planting hole depth and design alternative drainage system as required.
- 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.
- The planting process is similar for deciduous and evergreen trees.