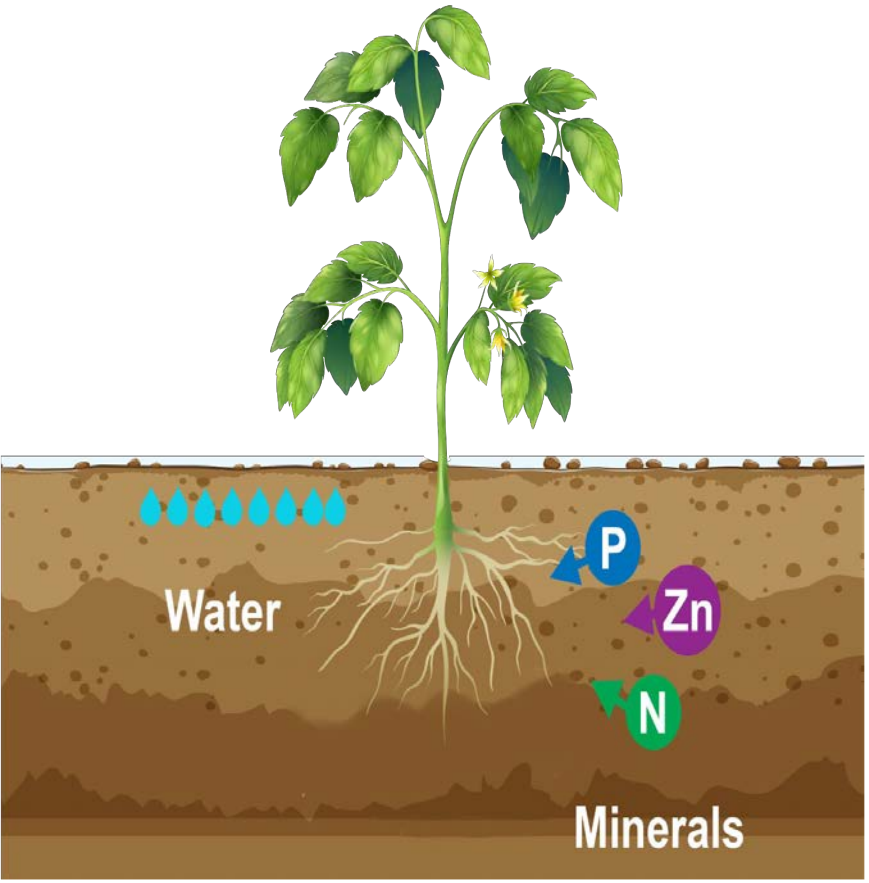
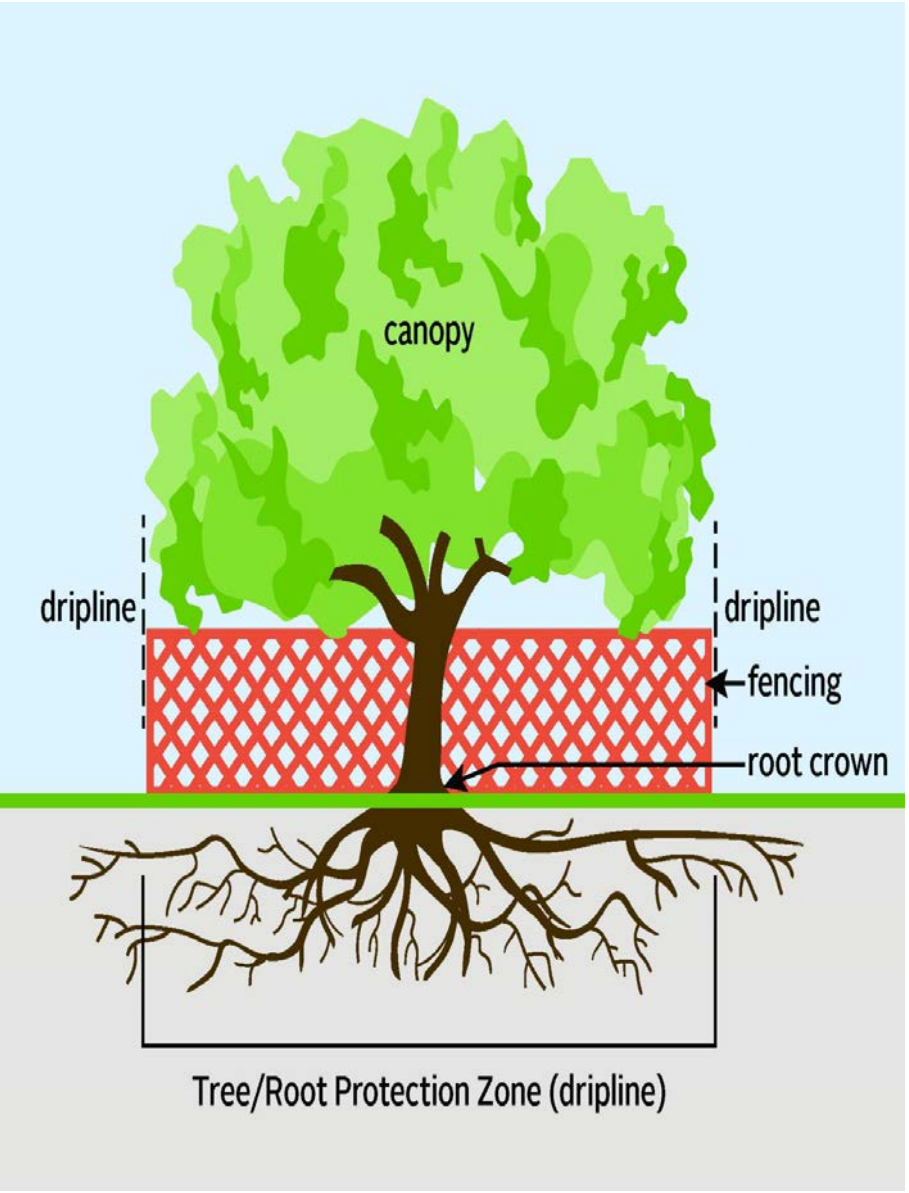


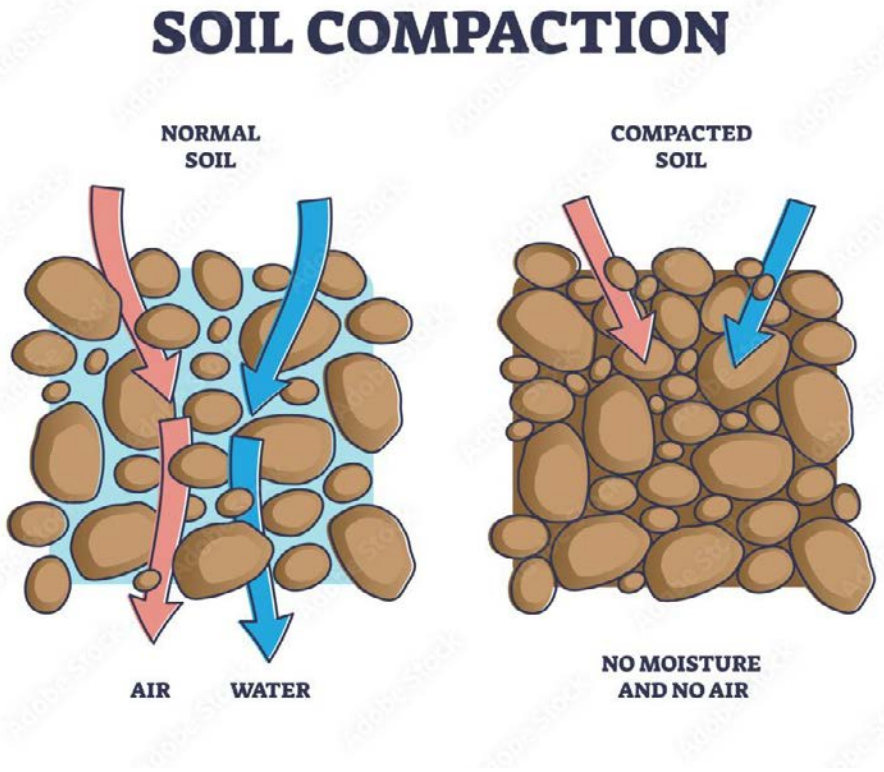
- Trees absorb water and nutrients through their roots.
- The architecture of a root system helps anchor a tree in the ground.
- This anchorage will prevent the tree from blowing over in strong winds.
- Most tree roots occur in the top one metre of soil.
- Roots occur in this portion of soil because of the high oxygen and mineral content.
- Also, water from rain is more accessible in this section of soil.



- Most tree roots extend out 2 – 2.5 times the width of the crown.
- With tall, column-like trees, the root system extends out to the same height as the tree.
- Maximum root extension for many mature trees is 60ft -90ft.
- The Structural Root Zone (SRZ) is the area of the root zone that is required for tree stability.
- Severing the wrong root in this zone could cause the tree to topple over (Calculating SRZ radius = (DRC x 50) 0.42 x 0.64).
- The tree protection zone (TPZ) is the principal means of protecting trees on development sites. The TPZ is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable. The radius of the TPZ is calculated for each tree by multiplying its DBH x 12

Construction activities can significantly affect tree roots in several ways:

1) Soil Compaction: Heavy machinery can compact the soil, making it difficult for roots to grow.
2) Root Damage: Roots may be damaged during construction, leading to tree decline and death
3) Restricted Growth: Compacted soil inhibits root growth, limiting a tree's ability to anchor itself firmly.



WBC
Stowers


CAT
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CAT
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CAT
745C
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Early Afternoon of 3/6/25


Late Afternoon of 3/6/25


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