

## DETERMINING THE CRITICAL ROOT ZONE

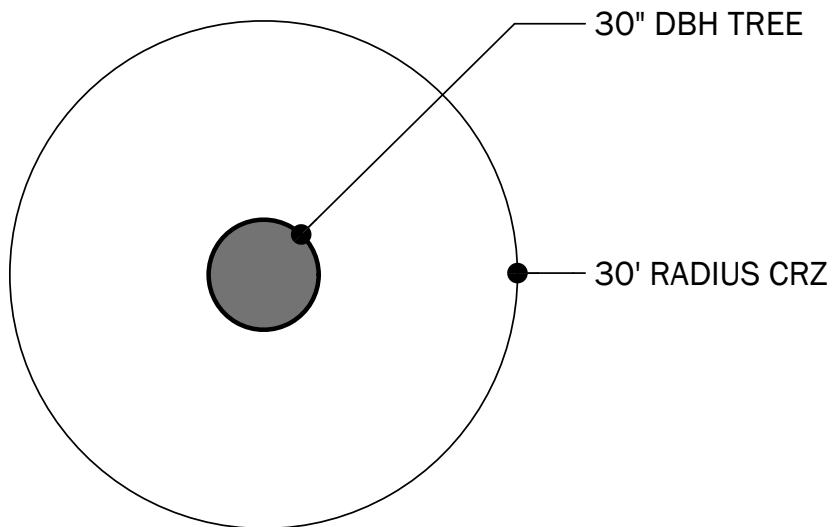
THE CRITICAL ROOT ZONE OF A TREE IS THE ZONE IN WHICH THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF ROOTS OF MOST TREES WILL BE FOUND IN THE TOP 24" OF THE SOIL. OF THOSE, THE MAJORITY OF THE ROOTS THAT SUPPLY THE NUTRIENTS AND WATER TO THE TREE ARE FOUND IN THE UPPERMOST LAYER, JUST BELOW THE SOIL SURFACE. THE TOTAL AMOUNT OF A TREE'S ROOTS ARE GENERALLY PROPORTIONAL TO THE VOLUME OF THE TREE'S CANOPY. THEREFORE, IF THE ROOTS ONLY PENETRATE A THIN LAYER OF SOIL, THEN THE ROOTS MUST SPREAD FAR FROM THE TREE, BEYOND THE LIMITS OF THE CANOPY. GENERALLY ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

ROOTS ARE VITAL TO THE FUNCTIONING OF ANY TREE. THEY PROVIDE STRUCTURAL SUPPORT AS WELL AS THE MAJOR MECHANISM FOR NUTRIENT AND WATER UPTAKE FOR USE BY THE REST OF THE TREE. DESTROYING A SECTION OF A TREE'S ROOTS WILL ULTIMATELY RESULT IN A PROPORTIONAL LOSS OF THE TREE'S CANOPY

THE CRITICAL ROOT ZONE OF A TREE TO BE SAVED SHALL BE THE MINIMUM AREA PROTECTED WITH TREE PROTECTION FENCING.

THE FOLLOWING IS THE METHOD USED BY THE CITY OF GREENVILLE, SC TO DETERMINE THE SIZE OF THE CRITICAL ROOT ZONE.

1" DBH = 1' RADIUS OF  
THE CRITICAL ROOT ZONE  
(DBH=DIAMETER BREAST HEIGHT)



NOTE: DRAWINGS ARE NOT TO SCALE. USE AS A GUIDE FOR DETERMINING MINIMUM CRZ

### CRITICAL ROOT ZONE DETAIL

PROJECT NO.	REVISION	NO.	DATE	BY/CHKD
DATE				
October 11, 2013				
DESIGNED BY				
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