

STANDARD REQUIREMENTS

Minimum Plant Sizes

(10.125(b)(4)(C))

- Large and medium trees 2"
- Small trees minimum height of 6'
- Large evergreen shrubs minimum height of 2 feet at time of planting.

- Street buffer zone – large and medium trees – 3"
- Parking lot trees – large and medium trees – 3"

(10.125(b)(1)(C)(ii))
(10.125(b)(3)(A)(i)(aa))

Planting Area Requirements: Installation

(10.104(c))

- Small tree – minimum 24" depth; 25 square feet open soil area (50 cubic feet volume)
- Large or medium tree – minimum 36" depth; 160 square feet open soil area (480 cubic feet volume)

- Large and medium trees must be planted at least 4 feet from pavement and may share open soil areas.

Legacy trees

(10.104(d))

- Legacy tree- large tree - minimum of 500 square foot open soil area with 36" depth (1500 cubic feet volume) per tree. If soil depth is less than 36", soil area is increased to attain 1500 cubic feet volume.
 - Legacy tree – medium tree – minimum of 400 square foot open soil area with 36" depth (1200 cubic feet volume) per tree. If soil depth is less than 36", soil area is increased to attain 1200 cubic feet volume.
- For calculation, legacy trees may not share open soil areas with other large or medium trees.

Alternative planting area requirements

(10.104(e))

- Small tree – minimum of 30" depth and 25 square feet of open soil area.
- Large or medium tree – minimum of 36" depth of open soil area, and combination of all methods for a minimum of 240 cubic feet of volume. Trees planted in less than 480 cubic feet (160 sf x 3') do not count as replacement trees.
- Trees must be planted at least 2.5 feet from pavement.

Waiver.

(10.104(f))

- The building official may waive minimum requirements based on landscape architect report.

Tree Locations

(10.104(h))

Minimum standards

- 2' or greater from side or rear yard boundaries
- 20' or greater from traffic signs
- 20' from light poles
- 5' from underground local utility lines
- 5' from fire hydrants, electrical transmission boxes, water meters, and other ground utility access

Distance from buildings

- Large trees, 15'; medium trees, 12'; small trees, 5'; legacy trees, 30'.

Distance from large trees

- Large trees, 25'; medium trees, 20'; small trees, 10'

Distance from medium trees

- Large trees, 25'; medium trees, 20'; small trees, 10'

Distance from small trees

- 10' from small trees

Distance from overhead electric lines

- Large trees, 20' from center of main stem to closest point of an overhead electric line
- Medium trees, 15' from center of main stem to closest point of an overhead electric line
- Legacy trees, 30' from center of main stem to closest point of an overhead electric line

Adequate space

(10.104(g))

- All required trees must be planted in adequate space to allow unobstructed growth to maturity.

Irrigation Requirements

(10.106)

An automatic irrigation system is required for all commercial and multifamily uses with combined landscape areas of 500 square feet or more.

Renovations and additions

On building sites less than 2 acres, with permits for renovations or additions with landscape requirements:

All plants must be a maximum of 100 feet from an irrigation source with a permanently installed threaded hose connection.

Alternate irrigation

The building official may authorize an alternate method of irrigation if certified by a landscape architect or licensed irrigator, shown on an approved plan, and capable of maintaining the plant materials in a healthy, growing condition.

Soil Quality

(10.104(b))

Soil Resource Plan – required with the submission of a **landscape plan** (10.123) or **tree protection plan** (10.136).

distinguish soil zones for landscaping from soil zones for construction on the building site.

determine soil protection or soil modification for vegetation, if applicable.

Soil Zones:

_____ Protected zones – existing soil and vegetation is not disturbed

_____ Soil amendment or treatment zones – areas of minimal disturbance and soil is treated for nutrients and compaction.

_____ Construction traffic zones – areas of any construction use and activity

_____ Stockpiling topsoil and imported amendments zone – areas of soil retention on site for continued use on the site.

Soil Resource Assessment – required with **Sustainable Development Incentives (SDI)** and **legacy tree** installation.

Includes:

_____ Complete soil profile analysis for planting conditions used to determine necessary information for all proposed landscape planting areas, to delineate, quantify, and characterize the topsoils and subsoils of a site prior to these materials being excavated for reuse on site.

Additional minimum soil quality requirements –

_____ Soils used in landscape areas for tree planting must be shown in protected zones where existing soil and vegetation is not disturbed, or in zones modified to correct limiting factors for tree establishment and longevity.

_____ In soil resource assessments, ranges for physical, chemical, and biological indicators of soil quality in urban trees is determined from *ISA Best Management Practices for Soil Management for Urban Trees*, or in another publication approved by the building official.

Ideal and limiting ranges for key physical, chemical, and biological indicators of soil quality for urban trees.*

Indicator	Ideal Range	Limiting Range
Surface	Residues and many organisms present	Evidence of compaction, crusting, etc.
Color	Browns, reds, yellows	Grays
Smell	Earthy	Rotten
Texture type	Sandy loam, loam, or silt loam	Clay, sandy clay, silty clay, or sand
Clay (%)	<30	>40
Sand (%)	<70	>80
Structure type	Granular or subangular blocky	Massive, cloddy, platy, or single-grained
Aggregate stability	Most (>50%) aggregates stable in H2O	Most (>50%) aggregates dissolve in H2O
Bulk density (Mg/m ³)	< 1.4 (sandy) < 1.3 (clay)	> 1.7 (sandy) > 1.6 (clay)
Penetration resistance (MPa)	< 2	> 3
Volumetric water (%)	10 – 30	< 5 or > 40
Infiltration rate (mm/h)	> 25	< 5
Organic matter (%)	2 – 5	< 1 or > 10
Microbial respiration (mg/kg/d)	100 – 300	< 50 or > 500
pH (1:1)	6 – 7	< 5 or > 8
Electrical conductivity (dS/m)	1 – 2	> 4

*Soil Management for Urban Trees, 2014. Special companion publication to the ANSI A300 Part 2: Tree, Shrub, and Other Woody Plant Management – Standard Practices (Soil Management a. Modification, b. Fertilization, and c. Drainage)