

# Tree and Landscaping Manual



**City of Portland, Oregon - Bureau of Development Services**

1900 SW Fourth Avenue · Portland, Oregon 97201 | 503-823-7300 | [www.portlandoregon.gov/bds](http://www.portlandoregon.gov/bds)



## Guide to the Manual

The manual consists of several sections:

### **What rules apply and how to use the manual ..... 3**

This manual is intended as a guide to the Zoning Code sections dealing with trees and landscaping. Before finalizing your plans, contact the Bureau of Development Services Planning and Zoning section at 503-823-7526, or in the Development Services Center (DSC), first floor at 1900 SW 4th Avenue, Portland.

### **Frequently Asked Questions ..... 9**

This section presents information about why and how landscaping is required, what permits may be needed, and related matters.

### **Landscaping standards ..... 12**

This section defines and illustrates the different landscape standards. L1 is general landscaping, L2 and L3 are screening standards, L4 is a standard for high walls, L5 is a standard for berms, and P1 is a standard for landscaping the interior of parking lots. (Also See Title 11, Trees, for tree preservation and tree planting requirements for development situations.)

### **Maintenance, irrigation, protection, etc. .... 33**

This section outlines requirements for landscape plans, landscape installation and irrigation, maintenance, and protection of trees and other plant materials. It also shows how to maintain sight lines for security and to keep plants from blocking pedestrian ways.

### **Plant materials and the Suggested Plant Lists ..... 36**

This section lists trees and other plants that may be suitable for areas where landscaping is required. In addition, the section includes such information as the spacing distance of different plants, the size categories of trees, whether plants are native to Portland, and whether they prefer sun, shade, or a mixture of the two.



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### What Rules Apply?

The landscaping standards that apply to your site depend upon the zoning and the type of development you plan. Each type of development has certain landscaping standards that usually apply. The amount of area that must be landscaped may include a minimum landscaped area, landscaped setbacks, screening, others or combination of these.

**Caution:** this table is intended only to guide you to the standards that apply to most projects. Some projects require special screening, native plantings or other specialized landscaping. In addition, the City's Stormwater Management Manual and Erosion Control Manual have separate landscaping requirements.

Zone and Type of Development	Requirements	Landscaping Standards
<b>Single Dwelling Zones</b> 1) 1&2 Family	1) Tree preservation and planting, 11.50 & 11.60	Title 11
<b>Multi-Dwelling Zones</b> 1) 1&2 Family 2) Multi Family	1) Tree preservation and planting, 11.50 & 11.60 2) Minimum landscaped area, Table 120-3 and 33.120.235 Setbacks, Table 120-3 and 33.120.220 Parking Areas and Driveways, 33.266.130	Title 11 L1 L1, L2 L2, L3, P1
<b>Commercial Zones</b> 1) 1&2 Family 2) All other (multi-family, retail, office, other commercial)	1) Tree preservation and planting, 11.50 & 11.60 2) Minimum landscaped area, Table 130-3 and 33.130.225 Screening, 33.130.235 Landscaping abutting an R-zoned lot line, Table 130-4 and 33.130.215.B Parking Lots, 33.266.130 3) Exterior display and storage landscaping, 33.130.245	Title 11 L1 L3 L3 L3, L2, P1 L3
<b>Employment and Industrial Zones</b>	1) Minimum landscaped area, Table 140-3 and 33.140.225 Screening, 33.140.235 Landscaping abutting an R-zoned lot line, Table 140-3 and 33.140.215.B Parking Lots, 33.266.130 2) Exterior display and storage landscaping, 33.140.245	L1 L3, L2 L3 L2, L3, P1 L1, L2, L3, L4

There are several other factors that may affect the rules that apply to your landscaping. For example, special rules apply to work in an environmental zone.

The table below shows where to look for guidance about other landscaping rules:

<b>Development or activity</b>	<b>Find it in Zoning Code</b>	<b>Find it in the manual</b>
Plant and tree selection	33.248.030 Plant Materials	Plant Material Selection and the Suggested Plant Lists
Installation, maintenance and irrigation	33.248.040 Installation and Maintenance	Maintenance, irrigation, protection, etc.  Planting information is also presented in the Plant Material Selection and Suggested Plant Lists sections.
Tree protection	11.60.030 Tree Protection Requirements  Tree preservation plans are described in 11.50 Tree Preservation Plans.	Maintenance , irrigation, protection, etc. Describes the tree protection requirements and alternative tree preservation plans.
Tree preservation for Lend Divisions	33.630	Not in the Manual
All development in Environmental zones	33.430 Environmental Zones • Columbia South Shore • Cascade Station • Pleasant Valley	Not in the Manual
All development in Greenway zones	33.440 Greenway Zones	Not in the Manual
Tree cutting	In both Title 20 and Title 11.	See the Frequently Asked Questions section in the front of the Manual.
Street trees	Regulated by the Urban Forester. Not in the Zoning Code.	Not in the Manual
Stormwater maintenance	In Title 17 and the Stormwater Management Manual. Not in the Zoning Code	Not in the Manual
Erosion control	In Title 10 and the Erosion Control Manual. Not in the Zoning Code	Not in the Manual

## How to Use the Manual

This manual describes how to landscape areas that are required by the Zoning Code to have trees or other landscaping. It does not include information about street trees, which are regulated by the City's Urban Forestry Division, 503-823-4489.

The manual also does not describe the City's requirements for stormwater management or erosion control. For stormwater management requirements, refer to the *Stormwater Management Manual*, which is available on the Bureau of Environmental Services website at [www.portlandoregon.gov/bes](http://www.portlandoregon.gov/bes). For erosion control requirements, refer to the *Erosion Control Manual*, located on the Bureau of Development Services website at [www.portlandoregon.gov/bds](http://www.portlandoregon.gov/bds).

To use the *Tree and Landscaping Manual*, you should know what kind of development you want, where the property is, what zone the property is in (including any overlays or plan districts), and the general layout of the development you propose (i.e., at least a rough site plan).

For all development projects, you should contact the Planning and Zoning staff at 503-823-7256 or come into the Development Services Center at 1900 SW 4th Avenue for help determining the specific zoning regulations for your site and whether landscaping is required.

For all development of new structures or parking facilities, here's a list of the information you should gather about your project:

Site Information	
Location or address:	
Base zone	Overlay zone
Plan Districts	Site Area
Answer the following for all projects other than one and two family residences:	
Required setback	Length of each lot line
Lot line abutting an R-zoned lot (L3 required in C, E, and I zones)	
<input type="checkbox"/> yes <input type="checkbox"/> no Will any setback be 30 feet deep or more? L1, plus extra shrubs if wide	
Minimum landscaped area required (at least L1)	
Requirement for screening abutting an R-zoned lot? (L3)	
Parking Lots (see 33.266.130 in the Zoning Code)	
Number of parking spaces	
Interior landscaping required (if over 10 spaces) @ 45 sq. ft. per space (P1)	
Length of parking lot edges (perimeters, L2 unless abutting R-zoned lot)	
Width of perimeters, ft.	Area of perimeters (length x width), sq. ft.

After you have gathered this information, read in the Manual about the standards that apply (L1, L2, etc.). Then go to the *Landscaping Calculations Worksheet* and *Plant Coverage* pages.

Use the *Landscaping Calculations Worksheet* to calculate how many trees, shrubs, and ground cover plants you will need to fill your landscaped areas.

Some of the calculations are based on numbers of parking spaces, some on square footage, and some on the length of perimeters.

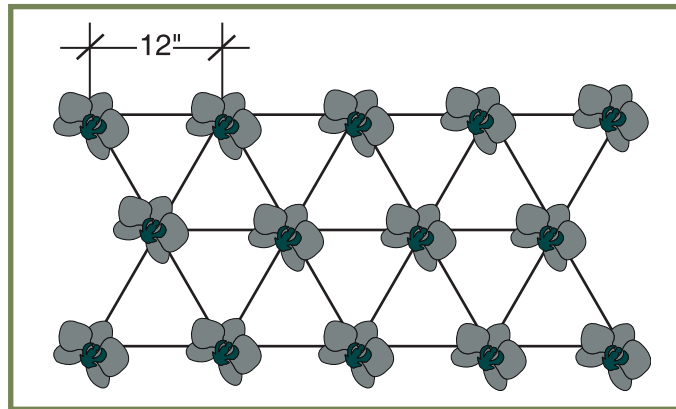
# Landscaping Calculations Worksheet

Landscape Area Calculations						
Perimeter length, in feet		Perimeter area, in square feet			L1 area, in square feet	
Parking Lot Calculations, where applicable						
Number of parking stalls			Parking stalls with front 2 feet landscaped			
Interior landscaped area required in square feet (at 45 sq.ft. per parking stall)						
Parking lot perimeter length, in feet			Parking lot perimeter area, in square feet			
Plant Materials Calculations						
Trees	Perimeters (L standards)			Parking Lot Interiors		
	Standard	Linear feet	Number of trees	Standard	Number of stalls	Number of trees
Large	1 tree per 30 linear feet			1 tree per 4 parking stalls		
Medium	1 tree per 22 linear feet			1 tree per 3 parking stalls		
Small	1 tree per 15 linear feet			1 tree per 2 parking stalls		
<b>TOTALS</b>						
Shrubs	Perimeters (L standards)			Parking Lot Interiors		
	Standard	Linear feet	Number of shrubs	Standard	Number of stalls	Number of shrubs
Shrubs	1 shrub per ___ linear feet			1.5 shrubs per parking stall		
	1 shrub per ___ linear feet			1 shrub per stall with 2 front feet landscaped		
<b>TOTALS</b>						
Ground Cover	Perimeters (L standards)			Parking Lot Interiors		
	Coverage per 100 sq. feet	Area in sq. feet	Number of plants	Coverage per 100 sq. feet	Area in sq. feet	Number of plants
Plant #1	___ plants			___ plants		
Plant #2	___ plants			___ plants		
Plant #3	___ plants			___ plants		
Plant #4	___ plants			___ plants		
Plant #5	___ plants			___ plants		
Plant #6	___ plants			___ plants		
<b>TOTALS</b>						

## Plant Coverage

The landscaping standards require that ground cover plants be planted so that they fill in the landscaped area within three years. The ground cover plant lists include plant spacing recommendations. If you select a plant not on the lists, you must provide the Bureau of Development Services (BDS) with plant spacing information either from published sources, such as the *Sunset Western Garden Book*, from Internet sources, or from cut sheets provided by the nursery. You must identify the source of the information so that BDS can verify it.

Ground cover plants other than turf forming grasses must be planted in triangular spacing, as shown below. In this illustration, the plants are planted on a 12 inch triangular spacing.



To calculate the number of ground cover plants needed to meet the standards, use the table below.

If the spacing for the plant is:	You need this many plant per 100 square feet of area:
<b>6 inches</b>	<b>460</b>
<b>8 inches</b>	<b>260</b>
<b>10 inches</b>	<b>167</b>
<b>1 foot</b>	<b>115</b>
<b>1.5 feet</b>	<b>51</b>
<b>2 feet</b>	<b>29</b>
<b>2.5 feet</b>	<b>19</b>
<b>3 feet</b>	<b>13</b>
<b>4 feet</b>	<b>7</b>
<b>5 feet</b>	<b>5</b>

