



# TREE CODE

## INFORMATION GUIDE

### Tree Requirements in Development

The Portland Tree Code: Title 11 details requirements for trees in development situations. These standards work together with any applicable tree standards from the Portland Zoning Code: Title 33. Section 11.50 of Title 11, **Trees in Development Situations**, regulates the removal, protection, and planting of trees as described below.

#### TREE PRESERVATION STANDARDS

Title 11 tree preservation is required for the following development projects:

- Sites 5,000 square feet or larger that include ground disturbing activities
- Sites with construction staging areas of 100 square feet or more on unpaved portions of a site

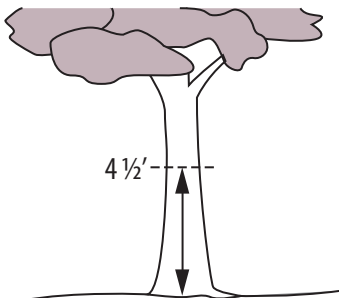
***Exemptions: Sites in the IH, IG1, EX, CX, CS, and CM zones, sites with specific tree preservation requirements per a land use review, and smaller projects such as fence and deck replacement or work within 10 feet of certain structures that do not impact root protection zones.***

The location, species, and size of existing trees 6 inches or larger in diameter must be identified on building permit site plans. Any construction staging areas must also be shown. See below for how to measure various types of trees. Although Title 11 tree preservation applies primarily to trees 12 inches or greater in diameter, it is helpful to show 6 inch diameter trees because there are 6 species of native trees that may count toward preservation at this size. In addition, trees 6 inches or larger may also count toward density if required (see Tree Density below). A tree survey may be needed to verify the location of the tree in relation to a neighboring property line or the proposed development. For removal of trees that straddle property lines, the owners of all properties where the tree is located must provide signed permission with the permit application.

Arborist reports are only required when identifying dead, dying, dangerous, or nuisance species trees, to be exempted from tree preservation, or when providing a smaller root protection zone than the Title 11 standard. A Landscape Professional can also identify nuisance species. Please see Section 11.60.030 or follow the "Arborist Report" link at the end of this handout for more information about this.

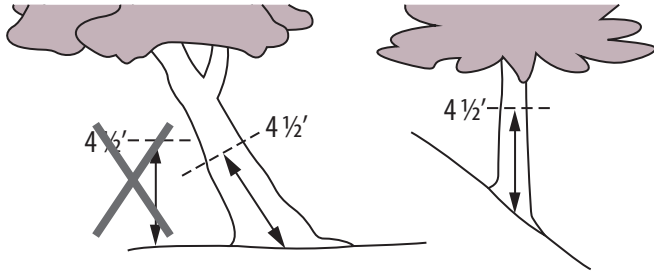
#### How to Measure Tree Diameter

##### Measuring Tree Size for Existing Trees



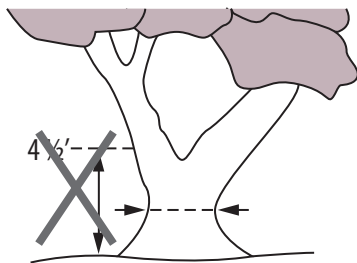
With the measuring tape, measure 4.5 feet up the trunk of the tree from the ground. Wrap your string around the tree trunk at 4.5 feet. Make sure the string is straight and tight around the trunk, and mark or cut the circumference on the string. Measure the length of string to get the circumference of the tree. Convert the circumference measurement to diameter by dividing the circumference by pi (3.14).

**Measuring Existing Trees with an Angle or on a Slope**



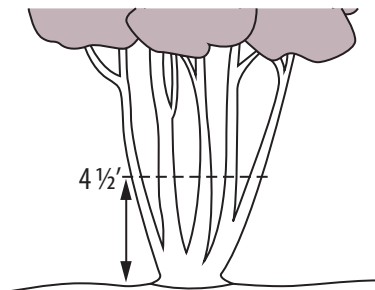
When the trunk is at an angle or is on a slope, the trunk is measured at right angles to the trunk 4.5 feet along the center of the trunk axis, so the height is the average of the shortest and the longest sides of the trunk.

**Measuring Split Trunk Tree**



When the trunk branches or splits less than 4.5 feet from the ground, measure the smallest circumference below the lowest branch. If the tree has a branch or a bump at 4.5 feet, it is better to measure the diameter slightly below or above the branch/bump.

**Measuring Multi-stemmed Trees**



For multi-stemmed trees, the size is determined by measuring all the trunks, and then adding the total diameter of the largest trunk to one-half the diameter of each additional trunk. A multi-stemmed tree has trunks that are connected above the ground and does not include individual trees growing close together or from a common root stock that do not have trunks connected above the ground.

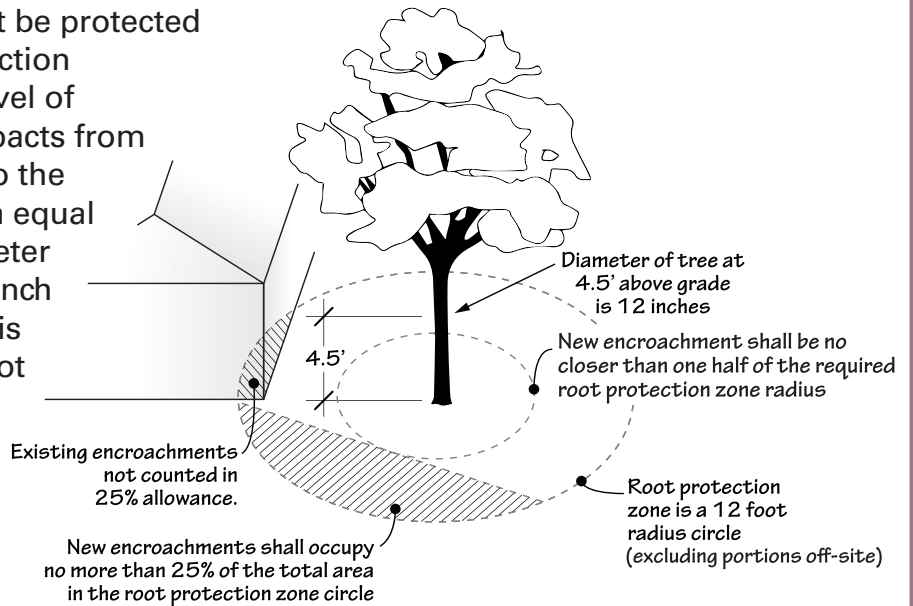
**Tree Protection: Prescriptive Path**

One-third of trees 12 inches in diameter and greater must be preserved unless exempted as noted above. All Heritage Trees and all non-exempt trees that are 36 inches or greater must be protected. In cases where tree protection will not be met, a mitigation payment into the City's Tree Planting and Preservation Fund (Tree Fund) is required. Mitigation payments are based on the size of the tree to be removed. These funds are used to purchase and plant trees within the same watershed as the trees that have been removed. If a tree that is 36 inches diameter or greater is proposed to be removed, payment into the tree fund and a 45-day neighborhood notification process is required. The applicant must post a notice on the site and send a notice to the recognized Neighborhood Association and District Coalition. Please see the neighborhood notice link at the end of this handout for more information or contact Planning and Zoning staff at 503-823-7526 for questions and sample forms.

**Table 50-1: Required Mitigation**

Size of Tree Removed (inches in diameter)	Required Mitigation
At least 12 and less than 20	The cost of (2) two-inch diameter replacement trees
At least 20 and less than 36	The cost of (4) two-inch diameter replacement trees
At least 36 or more	The cost per inch of tree removed

Root zones of preserved trees must be protected during construction. The root protection zone (RPZ) provides a minimum level of safeguard against construction impacts from compacted soil or physical injury to the tree itself. The RPZ is a circular area equal to one foot in radius for each diameter inch of the tree. For example, a 12 inch diameter tree has a 12 foot RPZ. This zone must be protected with a 6-foot tall chain link fence or by existing structures or fences that are at least 3.5 feet tall. Limited new encroachment into this zone is allowed as shown in the diagram to the right. Tree plan submittal requirements are detailed in Section 11.50.070.



**Tree Protection: Performance Path**

If the Prescriptive Path for tree protection cannot be met, then a report from a certified arborist will be required which includes the following information:

- Arborist information (ISA or ASCA number, contact details, signature)
- Date and time of site visit
- Description of why the Prescriptive Path is not practicable
- Tree information (size, location, root cover, tolerance to construction and impact of project based on tolerance based on species and health, identification of any past impacts on tree)
- Description of Alternate Tree Protection Fencing (methods and construction plan) and how this method will adequately protect the tree(s)
- Whether arborist must be on site and at what stages

If the arborist requires on site arborist supervision during construction a contract signed by both the project applicant and the arborist must be submitted with the arborist report.

**TREE DENSITY STANDARDS**

The tree density requirements will ensure that a baseline amount of tree canopy is either planted or retained on the development site. **Exemptions: Sites that are zoned IH, IG1, EX, CX, CS, and CM, projects reviewed under Demolition, Site Development, Septic, Plumbing or Zoning permits, and sites subject to Airport Landscape standards.** All new development projects and exterior alterations with valuations greater than the Portland Zoning Code Non-conforming Upgrade threshold of Chapter 33.258 are required to meet tree density standards. For alterations, up to 10% of the project value may be required to be spent toward tree density. The number of required trees is determined by the type of development and the site area. Applicants may preserve, plant, and/or pay into the Tree Fund to meet these standards. The tables below show tree density areas based on the type of development and how different size trees are calculated in these areas. Detailed information about this can be found in Section 11.50.050. Current non-conforming upgrade thresholds can be found in the Portland Zoning Code Non-Conforming Development Section 33.258.070.D.2.a.

**Table 50-2: Determining Required Tree Area**

Development Type	Option A	Option B
1 & 2 Family Residential	40% of site or development impact area	Site area minus building coverage of existing and proposed development
Multi Dwelling Residential	20% of site or development impact area	
Commercial/Office/Retail/Mixed Use	15% of site or development impact area	
Industrial	10% of site or development impact area	
Institutional	25% of site or development impact area	
Other	25% of site or development impact area	

**Table 50-3: Number of Required Trees and Minimum Planting Area**

Canopy size category (at maturity)	Number of trees required per size of tree area	Min. required planting area per tree (min. dimension)
Large	1 per 1,000 s.f.	150 s.f. (10' x 10')
Medium	1 per 500 s.f.	75 s.f. (5' x 5')
Small	1 per 300 s.f.	50 s.f. (3' x 3')

**STREET TREE REQUIREMENTS**

Street trees must be integrated into frontage improvements where practicable. To help verify Urban Forestry requirements, site plans should also show the trees in the adjacent street that are 3 inches or greater. Please contact Urban Forestry at 503-823-TREE if you have questions about this.

**Helpful Contacts & Links**

Planning and Zoning (Trees in Development)	503-823-PLAN (7526)
Urban Forestry (Trees in Street or Non-Development Situations)	503-823-TREE (8733) trees@portlandoregon.gov
Title 11: Full Text	<a href="http://www.portlandoregon.gov/trees/title11">www.portlandoregon.gov/trees/title11</a>
Tree measurement information	<a href="http://www.portlandoregon.gov/trees/dbh">www.portlandoregon.gov/trees/dbh</a>
Tree protection information	<a href="http://www.portlandoregon.gov/trees/60048">www.portlandoregon.gov/trees/60048</a>
Arborist reports	<a href="http://www.portlandoregon.gov/trees/article/571400">www.portlandoregon.gov/trees/article/571400</a>
Neighborhood Notice requirements for large tree removal	<a href="http://www.portlandoregon.gov/trees/article/576580">www.portlandoregon.gov/trees/article/576580</a>

For more information visit or call the Planning and Zoning Staff in the Development Services Center at 1900 SW 4th Avenue, Suite 1500, 503-823-7526  
Current Zoning Code is available at [www.portlandoregon.gov/zoningcode](http://www.portlandoregon.gov/zoningcode)