

City of Pasadena Tree Protection Guidelines

Revised 5/13/19

Purpose:

The City's Tree Protection Guidelines are established for projects subject to Chapter 8.52 'City Trees and Tree Protection' and for projects for which compliance with the Tree Protection Guidelines is a condition of approval. Specifically, the guidelines seek to avoid negative impacts to protected trees that may occur during construction such as:

- Mechanical injury to roots, trunks or branches
- Compaction of soil
- Changes to existing grade, which may expose or suffocate roots

Definitions for standardized terms and diagrams are included in the guidelines.

A. General Requirements:

1. Applicants may be required to place a security deposit in the amount of the assessed value of the tree as determined using the most recent version of the International Society of Arboriculture guide to plant appraisal. The security deposit will be returned to the applicant upon successful completion of the project and upon verification that the tree has not sustained significant damage during construction. If significant damage has been sustained, and the subject tree requires further monitoring post-construction, the City Manager or designee may hold the security deposit for an additional period of time. If the subject tree has fallen into irreversible decline and must be removed based on its condition, the applicant may forfeit the deposit to the City in order to cover removal and replacement costs.
2. Violations of the City Trees and Tree Protection Ordinance may result in administrative fines in an amount up to the Tree Replacement Value of the subject tree(s).
3. Compliance Orders issued respective to violations of the City Trees and Tree Protection Ordinance may include corrective action to replace the tree canopy loss that resulted from tree removal or catastrophic damage to a protected tree.
4. Violations to the Tree Protection Guidelines may result in fines assessed per day and imposed per violation, and the potential generation of a stop work order on the construction project.
5. When a tree protection plan is required, the plan may include written recommendations for the health and long-term welfare of the protected trees during the pre-construction, demolition, construction, and post-construction development phases. Notes on the plans would include specifics on avoiding injury, damage treatment and inspections of protected trees.
6. If an applicant finds that the implementation of the following guidelines is impracticable due to the unique site, landscaping, or other characteristics of the project, the applicant may submit a request to deviate from the guidelines to the Department reviewing the permit application. The Department of Public Works and the Department of Planning and Community Development will review the applicant's tree protection measures for public trees and private trees, respectively. The Director of Public Works and the Director of Planning and Community Development (or their designees) may approve requests to deviate from these guidelines.

Such requests may be submitted by the applicant on a tree protection plan; consulting arborist report; or other manner that articulates how the tree protection measures cannot be reasonably implemented.

B. Tree Protection Zone:

The Tree Protection Zone (TPZ) shall be established to the extent of the tree's dripline plus four (4) radial feet. The guidelines herein shall be applied to the TPZ to safeguard the health of protected trees. Tree roots are generally located in the top 12–24 inches of soil and can extend to a distance exceeding the trees height and/or width.

1. Refer to Standard Plan S-642 'Tree Protection Standard' for full details.
2. Protective (6-foot high minimum) chain-link fencing with an access gate of minimal width should be installed around the TPZ to the extent practicable subject to approval by staff prior to the commencement of any grading, construction, or demolition. Fencing must also include 8 ½" x 11" (minimum) signage that includes the following information: Tree Protection Zone; name and contact information of project owner or authorized representative; and "Please contact the Pasadena Citizen Service Center to report any concerns (626) 744-7311."
3. The TPZ shall be irrigated sufficiently with clean water to keep the tree in good health and vigor before, during, and after construction. This may mean deeply soaking the ground periodically.
4. No construction staging or disposal of construction materials or byproducts including but not limited to paint, plaster, or chemical solutions is allowed in the TPZ.
5. The TPZ should not be subjected to flooding incidental to the construction work.
6. All work conducted in the ground within the TPZ of any protected tree should be accomplished with hand tools, unless an air spade is utilized. Trenches in the TPZ should be tunneled, or completed with an air spade to avoid damage to roots within the TPZ. Information regarding air spades is available from staff.
7. Where structural footings are required and major roots (over 3" in diameter) will be impacted, the engineer of record should submit acceptable footing design alternatives and or location alternatives to staff before proceeding with further plan review.
8. Where more than 50% of the TPZ is impacted or roots greater than 3 inches in diameter are to be removed within the TPZ, the engineer of record should submit acceptable design alternatives to staff for review.
9. Any required trenching should be routed in such a manner as to minimize root damage. Radial trenching (radial to the tree trunk) is preferred as it is less harmful than tangential trenching. Construction activity should be diverted from the TPZ. Cutting of roots should be avoided (i.e. place pipes and cables below uncut roots). Wherever possible and in accordance with applicable code requirements, the same trench should be used for multiple utilities.
10. "Natural" or pre-construction grade should be maintained in the TPZ. At no time during or after construction should soil be in contact with the trunk of the tree above the basal flair.
11. In areas where the grade around the protected tree will be lowered, some root cutting may be unavoidable. Cuts should be clean and made at right angles to the roots. When practical, cut roots back to a branching lateral root.

12. When removing existing pavement in the TPZ, avoid the use of heavy equipment, which will compact and damage the root system.
13. If staff requires mulch in the TPZ, the mulch materials and location should be shown on the plan. Larger projects will require construction staging plans to indicate where materials will be stored and how the equipment will move in and around the property to minimize damage to the TPZ. Root damage and soil compaction may be mitigated in some cases by using trench covers or mulch in the TPZ.

C. Pruning:

* Pruning guidelines are for private trees only. Contact the Department of Public Works for public tree service requests 626-744-7311.

1. Pruning of all trees should be in accordance with industry standards (International Society of Arboriculture or ANZI 133.1).
2. Pruning of oaks should be limited to the removal of dead wood and the correction of potentially hazardous conditions, as evaluated by a qualified arborist. Excessive pruning is harmful to oaks. Removal or reduction of major structural limbs should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no "flush cuts"), and cuts should be made in such a way as to prevent the tearing of bark from the tree.
3. Pruning of trees other than oaks should be limited to the removal or reduction of major structural limbs and should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no "flush cuts"), and cuts should be made in such a way as to prevent the tearing of bark from the tree.
4. Landmark Trees must be pruned by or under the direction of a qualified arborist.

D. Inspections:

1. Inspection of Protective Fencing: City staff may require inspection of fencing to verify placement and approval of materials prior to the commencement of construction.
2. Pre-construction meeting. City staff may require an on-site pre-construction meeting with the contractor and or applicant to discuss tree protection with the site supervisor, grading equipment contractors, and demolition crew.
3. Inspection of rough grading. City staff may require inspection to ensure protected trees will not be injured by compaction, cut or fill, drainage and trenching activities.
4. Special Activity in the Tree Protection Zone: City staff may require the direct on-site supervision of work in the tree protection zone.
5. Periodic Inspections: City staff may require inspections verifying adherence to tree protection measures during the on-going construction process. The cost for inspections by City staff or a contract Certified Arborist may be invoiced to the property owner.

E. Definitions:

1. *Basal flair or root crown* means the tree trunk where it emerges from the root system and flairs out

to create the base of the tree.

2. *Canopy* means the area of a tree that consists primarily of branches and leaves.
3. *Dripline* means the outermost area of the tree canopy (leafy area of tree).
4. *Certified Arborist* means an individual who has demonstrated knowledge and competency through obtainment of the current International Society of Arboriculture arborist certification, or who is a member of the American Society of Consulting Arborists.
5. *Tree Protection Zone (TPZ)* means the area within a circle with a radius equal to the greatest distance from the trunk to any overhanging foliage in the tree canopy plus four (4) radial feet.
6. *Tree Replacement Value/Cost:* the value or cost of the injured or removed tree determined utilizing the most recent edition of the Guide for Plant Appraisal, published by the International Society of Arboriculture ("ISA").

APPROVED BY:



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