

# City of Claremont

## Tree Policies and Guidelines Manual



Community Services Department  
(909) 399-5431

Adopted: February 1997  
Revised: November 1999  
June 2007  
June 2011  
January 2015  
September 2017  
May 2020  
June 2024 - Draft





# TABLE OF CONTENTS

## Contents

<b>INTRODUCTION</b> .....	<b>4</b>
Statement of Commitment.....	4
The Tree Policy and Guidelines Manual.....	5
Amendments to Policies.....	6
City Easements and Right-of-Ways.....	6
<b>GUARDIANSHIP FOR THE COMMUNITY FOREST</b> .....	<b>7</b>
The City Council.....	7
The Community and Human Services Commission.....	7
The Community Services Department.....	7
The Property Owners and Residents of Claremont.....	8
<b>FOUNDATIONS FOR TREE PRESERVATION</b> .....	<b>8</b>
The General Plan.....	8
Land Use and Development Code.....	10
The Claremont Municipal Code.....	10
<b>GENERAL PRESERVATION AND PLANNED MANAGEMENT</b> .....	<b>10</b>
Species Diversification and Density.....	10
Heritage Trees and Historic Grove Preservation.....	11
Claremont’s Designated Street Tree List.....	11
Redesignation Process.....	13
Inventory Administration.....	13
<b>MAINTENANCE GUIDELINES</b> .....	<b>14</b>
General.....	14
Planting.....	15
Conflict Prevention at Planting.....	19
Maintaining the Tree’s Growing Space.....	19
Watering Schedule.....	20
Pruning.....	22
Pest and Disease Management.....	28
Removal.....	29
<b>PRIVATE PROPERTY OWNERS AND RESIDENTS</b> .....	<b>39</b>
Private Property Hardscape Damage Response Procedure.....	39
<b>CLAIMS</b> .....	<b>40</b>
Hardscape Damage Response Procedures.....	40
<b>TREE DONATIONS</b> .....	<b>41</b>
Standard Tree Donations.....	41
Oak Park Cemetery Memorial Tree Program.....	42
Plaques.....	42
<b>PERMITS</b> .....	<b>43</b>
<b>CONSTRUCTION MANAGEMENT</b> .....	<b>43</b>
<b>GLOSSARY</b> .....	<b>46</b>
<b>APPENDICES</b> .....	<b>49</b>

- Appendix A – Chapter 12.26 of the Claremont Municipal Code
- Appendix B – Heritage Tree and Historic Grove List
- Appendix C – Designated Street Tree List
- Appendix D - Conflict Prevention Methods Before Planting
- Appendix E – Mitigation Methods for Tree and Infrastructure Conflict

## INTRODUCTION

### **Statement of Commitment**

Claremont is a community which recognizes its trees as one of its most valuable resources. For this reason, the City has dedicated itself to the preservation, proper maintenance, and continued enhancement of our community forest.

The over 25,100 City street and park trees throughout Claremont are a community asset valued at more than 95 million dollars. The community forest provides environmental benefits, adds to property values, and contributes to an enhanced quality of life for all of Claremont's residents. Trees also represent a significant facet of our community heritage, playing a central role in the history of the City. The City had a Tree Committee even before it had a formal City Council. These early citizens set a standard of dedication to tree preservation for the enrichment of the community.

There are many benefits to having a healthy, well-maintained community forest, including reducing the urban heat island effect which results from having extensive amounts of unshaded hardscape, conserving energy and reducing cooling costs, significantly increasing property values, slowing down harsh winds, muffling street and traffic noise, and providing shade and overall beauty to our community. Trees improve the environment in which we live by moderating the climate, providing oxygen, filtering out particulate matter from smog-laden air, conserving water, reducing erosion, and harboring wildlife within our urban setting.

The City's policy is to protect and preserve healthy trees whenever possible to maintain the valuable benefits trees provide to the environment and quality of life in Claremont. The benefits of the urban forest must also be balanced with the need to ensure public safety, because at times, trees will come in conflict with the built urban environment. We must evaluate whether tree preservation and public safety are both possible outcomes when trees conflict with infrastructure like traffic signs, sidewalks, or overhead utilities. Additionally, the City must comply with requirements of the Americans with Disabilities Act (ADA) to ensure accessible paths of travel, which takes precedence over tree preservation when trees conflict with ADA compliance.

The thorough assessment and analysis of the tree condition and the consideration of alternative options to removal is intended to preserve trees as a first option. When a removal of a City tree is recommended, the Tree Policies and Guidelines Manual (Manual) outlines that, all mitigation methods to preserve the tree have been considered and are either, not feasible, costs of hardscape/infrastructure/building repair are greater than the economic value of the tree, or mitigation methods are not compliant with ADA. This process helps ensure that every decision made by the City, whether to preserve or remove a tree, is directed towards the best possible outcome for the community of Claremont.

Unfortunately, our trees suffer from the rigors of urban life, including air pollution, vandalism, compacted soils, limited growing spaces, and the extremes of the Southern



California climate. To overcome such rigorous growing conditions for our City trees and reap the benefits of our most valuable assets, the care of our community forest must be a public/private partnership.

### **Urban Forest Management Plan**

In February 2020, the City Council adopted an Urban Forest Management Plan (UFMP). The UFMP is meant to be a guiding document giving direction on how the urban forest should be enhanced and maintained. It discusses trends and issues that may affect the urban forest and provides a framework to develop a holistic approach to the urban forest program. The plan is a working document that will continually be implemented and monitored over the next 40 years. The Urban Forest Management Plan acts as a long-term guide to the urban forest, while the Tree Policies and Guidelines Manual directs the day-to-day operations of the urban forest management program.

### **The Tree Policy and Guidelines Manual**

This Tree Policy and Guidelines Manual (Manual) defines and illustrates the policies and procedures that shall be utilized by City staff in the management and care of all trees located on City property or within the City's public right-of-way. The following pages document the City of Claremont's official guidelines for the planning, planting, pruning, removal, preservation, and protection of all City-owned trees, herein referred to as Claremont's community forest. These policies shall be based upon the highest nationally accepted standards set for tree care and shall act as the source reference by City staff for the implementation of the duties, authorities and regulations delineated in Chapter 12.26 of the Claremont Municipal Code (Appendix A). The most widely accepted standards for tree care are provided by the American National Standards Institute (ANSI) and the International Society of Arboriculture (ISA). The Southern California Association of Governments (SCAG) provides Climate Resilient Urban Greening Best Practices for urban forestry. ANSI Standards, ISA, and SCAG best management practices are considered throughout the Manual. The most updated version of the Claremont Municipal Code can be found on the City website at [www.ci.claremont.ca.us](http://www.ci.claremont.ca.us). These policies are established to address the specific needs of Claremont's community forest and should be followed for all tree care practices for publicly maintained trees. Any inconsistency should be viewed in terms of the underlying intent.

### **Guiding Principles**

The City shall adhere to the following principles in all its tree-related policies and processes:

- Trees of our urban forest are more than aesthetic enhancements and shall be cared for as a community asset.
- Trees are the backbone of our urban ecosystem by providing habitat for wildlife and are an essential part of our community's green infrastructure.



- Promote the health and growth of our urban forest by following research-backed, arboricultural best management practices for tree selection, planting, watering, and pruning.
- Promote a robust urban forest through policies and practices that reduce its vulnerability to known diseases or pest infestations, high wind events, and future threats, including the anticipated effects of climate change and demand for future development.
- Engage in a continuous process of long-range planning for the growth and maintenance of our urban forest.
- Balancing the benefits of the urban forest with the safety of the public is a priority of the City.
- Provide educational outreach programs to increase public appreciation of the urban forest with the intent to support local businesses, institutions, organizations, and individuals in their efforts to grow and maintain our urban forest.
- Proceed in a manner that is inclusive to all community members of Claremont by proactively balancing the maintenance of the urban forest while allowing community members to safely live amongst trees.
- Proceed in a manner that is transparent, ensuring tree-related decision-making processes are documented and publicly accessible, allowing for engagement in the tree maintenance program.

### **Amendments to Policies**

These policies shall be reviewed annually. Amendments may be initiated by staff or members of the Tree Committee, Community and Human Services Commission, or City Council. The City Council reserves the right to approve amendments to the policies if it is deemed by majority opinion that such revisions or updates are necessary. Any amendments to these policies sought by other public or private interests shall first receive approval from the City Council.

### **City Easements and Right-of-Ways**

Section 12.26.010 of the Claremont Municipal Code (Appendix A) defines "easement," "parkway," or "right-of-way".

The City retains an established right-of-way or easement on each public street. These easements are City-controlled areas for the purpose of public improvements, including streets, sidewalks, curb and gutters, driveway approaches, streetlights, street signs and street trees.

Easements may vary per street and will usually extend beyond street width. Generally,



the width of these parkways or landscape easements are around ten (10) feet from the face of the curb, but this dimension may range from anywhere between one (1) foot and thirty (30) feet. The City Engineer shall keep official record of the City easements.

Any tree located within this public easement is recognized as a City-owned tree and is subject to the policies described herein and in the Municipal Code (Appendix A), which govern all City trees and public property.

## **GUARDIANSHIP FOR THE COMMUNITY FOREST**

### **The City Council**

The elected officials of the City provide leadership, at the request of the citizens, to ensure that our community trees continue to be a priority in Claremont. They oversee the funds which support the forestation and preservation of the community forest. They also make decisions regarding policies and ordinances which pertain to the care and protection of all trees on public property as well as to the development and enhancement of private property.

### **The Community and Human Services Commission**

Section 12.26.020 of the Claremont Municipal Code (Appendix A) defines the duties of the Community and Human Services Commission.

The commission is made up of City Council appointed citizen representatives, who serve, among other capacities, as the City's tree advisory board. The commission appoints a Tree Committee from its membership on an annual basis and holds regular meetings for the purpose of reviewing tree-related issues and determining the needs of the City with respect to its tree planting, tree removal, and maintenance program. Recommendations related to arboriculture principles and tree maintenance shall be received by the Tree Committee and commission from an International Society of Arboriculture (ISA) Certified Arborist on staff, or an external consultant who is an ISA Certified Arborist. The Tree Committee and commission shall consider the recommendation, hear any public comments related to the topic, and determine if the recommendation will be implemented or if further information is necessary to approve a recommendation. Recommendations received may include, but is not limited to, policies and ordinances, which pertain to the care and protection of public trees, and selecting specific species of trees for designation along City streets. As representatives to the community, commissioners also help educate and inform the public on proper tree care and promote the value of trees to the community.

### **The Community Services Department**

The Community Services Department is responsible for providing the daily management and emergency services which sustain our community forest. The department provides forestation and maintenance services and oversees all contracted and permitted work on City trees. The department retains and updates the City's tree inventory and is the primary



resource for residents who contact the City with concerns and questions about trees. The department also provides community-facing educational materials on proper tree care, information on specific City trees, as well as sponsors City-wide events, such as the annual Arbor Day celebration, to enhance the public's awareness of the important role trees play in the community.

Section 12.26.030 of the Claremont Municipal Code (Appendix A) defines the duties of the Director of Community Services. Under general direction from the Director of Community Services, department staff, and either a staff member who is an ISA Certified Arborist, or with direction from a third-party ISA Certified Arborist if one is not on staff, shall be responsible for overseeing the care and management of the community forest.

### **The Property Owners and Residents of Claremont**

Section 12.26.040 of the Claremont Municipal Code (Appendix A) defines the duties of the private property owners in the care of public trees.

Tree care responsibilities for the residents of Claremont include protecting the tree from vandalism and providing enough water throughout the establishment period as well as in times of high heat or drought events, to promote the health and vitality of any City tree located within the public easement on their property, and notifying the Community Services Department of any suspected tree hazards or maintenance needs that their City trees may require.

## **FOUNDATIONS FOR TREE PRESERVATION**

The foundations for the preservation and enhancement of our community forest are based upon Claremont's General Plan, Land Use and Development Code, and Municipal Code (Appendix A).

### **The General Plan**

Claremont's General Plan refers to trees in several of its elements. The goal of these tree management policies is to carry out the policies of the plan as follows.

Land Use, Community Character, and Heritage Preservation Element  
Community Design Section:

“On-going maintenance and enhancement of Claremont's street trees through implementation of the City's Tree Policy Manual will continue to promote streets as sustainable community “places” that provide shade and contribute to clean air. The City is committed to preserving its existing street trees, replacing trees that are damaged or dying, and expanding community forests in newer areas of Claremont.”

Policy 2-13.1: Maintain and enhance the City's collection of street trees and improve Claremont's image of a “City with trees.”





Policy 2-12.4: "Encourage all new development to preserve the natural topography of a site and existing mature trees."

Open Space, Parkland, Conservation, and Air Quality Element  
Street Trees and Community Forest Section:

"While trees add considerably to the aesthetic quality of Claremont, "community forests" also promote a good community environment and provide biological benefits. They contribute to clean air, provide cooling shade, support wildlife, increase property values, control soil erosion and conserve water, create sound barriers, and provide protection from high winds. The community forest is comprised of a street tree system, trees on parks and other public lands, and trees on private properties and in yards throughout the City. The community forest is distinct within established areas of Claremont where trees have fully matured, particularly in The Village, Historic Claremont, Old Claremont districts, and on The Claremont Colleges' campuses. The City is committed to preserving its existing trees, replacing trees that are damaged or dying, and expanding community forests in newer areas of Claremont."

Policy 5-8.1: "Develop a tree planting policy that strives to accomplish 50% shading of constructed paved and concrete surfaces within five years of construction."

Policy 5-8.2: "Provide adequate funding to manage and maintain the City's urban forest, including sufficient funds for tree planting, pest control, scheduled pruning, and removal and replacement of dead trees."

Policy 5-8.3: "Coordinate with local and regional plant experts (e.g. Rancho Santa Ana Botanic Garden) in selecting tree species that respect the natural region in which Claremont is located, to help create a healthier, more sustainable urban forest."

Policy 5-8.4: "Safeguard and enhance Claremont's community forest by protecting existing stands of trees and other plant material of substantial value."

Policy 5-8.5: "Continue to plant new trees (in particular native tree species where appropriate), and work to preserve mature native trees."

Policy 5-8.6: "Increase the awareness of the benefits of street trees and the community forest through a citywide education effort."

Policy 5-8.7: "Continue to manage and care for all trees located on City property or within the City's right of way."

Policy 5-8.8: "Provide information to the public on correct tree pruning practices."

Policy 5-8.9: "Encourage residents to properly care for and preserve large and beautiful trees on their own private property."

Policy 5-18.5: "Continue to require the planting of street trees along City streets and



inclusion of trees and landscaping for all development projects to help improve airshed and minimize urban heat island effects."

Measures for Implementation, Streets section, Measure E. "Street trees shall be selected for their adaptability to the City's environmental conditions, visual characteristics, and shading. Deciduous trees shall be used so that shade is provided in summer with open views in winter."

### **Land Use and Development Code**

Chapter 4, Part 1

Section 413.B Yard Landscaping Requirements

"A minimum of one tree per fifty feet of lot width in addition to street trees is encouraged."

### **The Claremont Municipal Code**

Chapter 12.26 of the Claremont Municipal Code (Appendix A) establishes the duties, authorities and regulations governing all City trees. All of the tree management policies found herein are based upon this ordinance. The purpose of these policies is to implement this section of the Municipal Code (Appendix A).

## **GENERAL PRESERVATION AND PLANNED MANAGEMENT**

One of the most important aspects of preserving Claremont's community forest is the ability to retain a manageable population in terms of species diversity, density, and climate appropriateness. The City shall achieve this through proper planning with consideration to current urban forestry research, and gradually replacing species predicted to fare poorly in anticipated future climates, rather than through drastic deforestation and replacement measures, whenever possible. No healthy, living tree shall be removed for the sole purpose of altering an area's existing tree species composition.

### **Species Diversification and Density**

A diversified population of tree species helps to guard against the negative impacts of monocultures. Monocultures, large populations of a single tree species, may be ravaged during insect or disease epidemics. On the other hand, too diversified a population may create an unmanageable inventory of trees. Thus, as a means of controlling species vicissitude, it shall be the goal of the City to retain a population of trees in which the optimum quantity of a single tree species shall make up between .5 and 5 percent of the total tree population, and that no single tree genus shall exceed 12 percent of that population.

Current best management practices (BMPs) for species diversity standards in public tree



inventories recommend a representation of no more than 10% of any one species, 20% of any one genus, or 30% of any one family. Guidelines provided in this Manual are used for planning a more resilient community forest.

### **Heritage Trees and Historic Grove Preservation**

Specific trees, which by virtue of their species, size, age, appearance or historical significance are determined to be outstanding, shall be protected by declaration of Heritage Tree status, and shall so be protected by ordinance. Sections 12.26.010 and 12.26.090 of the Claremont Municipal Code (Appendix A) defines "Heritage Trees" and the protection criteria established for them.

Historic groves of a particular species in a specific area, such as the American Elms along Indian Hill Boulevard and the Eucalyptus trees along College Avenue, shall also be afforded the same protective status as Heritage Trees.

Historic groves are vulnerable to large-scale loss if a pest or pathogen targeting the species enters the community forest. In some instances, a Historic Grove may consist of trees that are no longer recommended to be planted in Claremont as they are not expected to be adapted to future climate conditions or deemed not appropriate for the site. In these instances, tree species which differ from, but that complement the historic grove and neighborhood characteristics, shall be planted to increase species diversity and resilience of the community forest.

All nominations for Heritage Tree or historic grove candidates shall first be reviewed and approved by the Community and Human Services Commission. The Community Services Department shall retain a detailed inventory record of all Heritage Trees. A copy of the Heritage Tree and Historic Grove List is included in the Appendix B of this manual.

The City shall encourage property owners to consider nominating large trees on private property as candidates for Heritage Tree status. To be considered a Heritage Tree on private property, the tree must be visible from publicly accessible location(s).

### **Claremont's Designated Street Tree List**

Claremont's tree population management plan shall be based primarily upon the City's Designated Street Tree List. Section 12.26.010 of the Claremont Municipal Code (Appendix C) defines and authorizes the creation and implementation of this list. A copy of the Designated Street Tree List is included in the Appendix C of this manual.

The Designated Street Tree List identifies several tree species designated for each City street, including drought-tolerant varieties. Multiple species are identified to increase species diversification, prevent deforestation related to pests and disease, and minimize the negative impacts of species monocultures. Selecting the appropriate species for locations where there are overhead clearance conflicts or grow space limitations, ensures the right tree is planted in the right place and allows the tree to grow to maturity while minimizing conflicts that may necessitate consideration for removal.



Each street shall be assessed to provide a selection of designated species based on site-specific evaluation and street site conditions with a goal to plant trees that maximize the available space and take into consideration the public infrastructure such as bike lanes and/or parkway conditions. Appropriate tree species shall be selected for designation based upon the following criteria and shall be noted in the species list to allow for an informed decision-making process:

- **Mature tree stature.** Trees are categorized into small-, medium-, and large-stature trees to allow for “right tree, right place” planting. Large stature trees will be prioritized as they provide more benefits per tree to the community than smaller stature trees.
- **Species hardiness.** Based upon the trees’ adaptability to the region in terms of its resistance to adverse growing conditions, namely frost or freezing temperatures.
- **Growspace.** The amount of parkway space or vegetated area available relative to the expected tree trunk circumference and root flare at maturity.
- **Overhead clearance.** The potential for conflicts between the tree’s canopy and overhead obstructions, such as utility lines, at the tree’s mature height.
- **Character and basic design plan for the neighborhood.** The general compatibility between the tree and its location; e.g., an eighty foot tall tree may not be appropriate in a neighborhood of small, single story homes.
- **Pest and disease resistance.** Species known for having a lack of significant pest or disease problems or resilience against prominent pests or diseases are preferred.
- **Water use considerations.** Species with very low or low levels of water requirements based on the Water Use Classification of Landscape Species (WUCOLS) tool, are more tolerant of long, dry periods and lack of water, and are preferred.
- **Durability and wind resistance.** Species that are not prone to sudden limb drop and provide for good wind buffers are preferred.
- **Canopy and subsurface growth habits.** Species that do not have growth characteristics such as surface roots, extensive sucker production, or abundant fruit litter are preferred.
- **Irrigation drainage and soil qualities.** Trees that do well under a variety of different irrigation and soil conditions are preferred.
- **General aesthetics and shading potential.** Trees that provide canopy cover over hardscape with some aesthetic benefits, such as showy flowers or attractive fall color, are preferred.
- **Native tree species.** Native trees are those that naturally occur in a region and



support biodiversity and wildlife. Species that are native to the Southern California region are preferred with consideration of species diversity standards.

- **Availability.** Trees that are generally available in local nurseries are preferred.
- **Substitution of cultivars.** Staff may substitute different cultivars of the Crape Myrtle, Redbud, or Chitalpa if the designated cultivar is not available.
- **Roadway clearance.** The Highway Design Manual specifies certain vertical clearance requirements determined by the roadway classification. These measurements are taken from the lower foliage of overhanging branches.

Designated street trees, unless otherwise noted, are standard form single trunk trees to accommodate their eventual mature size. This form is best to maintain safe vehicle and pedestrian access around the tree. Multi-trunk trees are not an approved form for a street tree unless approved by staff for a valid reason.

The Designated Street Tree List shall be retained by the Community Services Department. The list shall identify every public street in the City with approximately three to five designated species being denoted in both botanical and common names.

### **Redesignation Process**

Sections 12.26.020 and 12.26.030 of the Claremont Municipal Code (Appendix A) declares that all revisions or updates to the Designated Street Tree List shall first be recommended by an ISA Certified Arborist, reviewed by the Director of Community Services, or his or her designee, and forwarded to the Community and Human Services Commission for approval.

**Property Owner Appeals.** If a property owner does not agree with the Commission's decision to either revise or update the Designated Street Tree List for the street in which the property exists, the property owner may appeal the decision to the City Council. The Community Services Department shall provide interested property owners with information on the commission appeal process.

### **Inventory Administration**

The Community Services Department shall keep current an inventory of all City-owned trees, including detailed site characteristics and work histories for each tree. This record shall be updated on a continual basis by the City's contractor and/or staff.

The inventory of City trees identifies a geospatial location (latitude and longitude coordinates), species (both scientific and common names), diameter at standard height (DSH), height, condition, parkway size, overhead utilities, estimated asset value, recommended maintenance, and work history.



## MAINTENANCE GUIDELINES

### General

**Certified Arborist.** Any City-contracted tree company shall be required to have in their employment a full-time permanent Certified Arborist, as accredited by the International Society of Arboriculture (ISA). This person shall be responsible for ensuring that the contractor's crews are performing work according to ISA Best Management Practices (BMPs) and American National Standards Institute (ANSI) Standards. The City strongly recommends that Claremont residents only use a firm that employs an ISA Certified Arborist for any work performed on privately owned trees.

**Certified Tree Worker.** All crew leaders performing tree work on City trees should be trained according to ISA BMPs and ANSI Standards and hold the ISA Certified Tree Worker.

**Contractor Qualifications.** All contractors shall provide all services in compliance with City specifications. Specifications are written based on the policies outlined in this Manual. It is recommended that property owners utilizing contracted tree workers require proof of proper licensing/insurance and obtain several references before employing them.

Every contractor hired by the City to do tree work shall:

- Agree to perform all tree work according to the City's ISA Certified Arborist specifications, guided by ISA BMPs and ANSI Standards, and follow the guidelines established in this Manual.
- Provide the City's ISA Certified Arborist with the name and on-site phone number of each of its designated Crew Leaders for each day of work.
- Ensure that its Crew Leaders remain on site to supervise all work while work is being performed.
- Ensure that each Crew Leader has a complete and current copy of the Manual while the contractor is performing work on City Trees.
- Ensure that all Crew Leaders are fully familiar with the contents and requirements of the Manual, to the extent that it impacts their work.
- Recycle green waste as directed in their contract.
- Have a valid State Contractor's license for tree work.
- Provide Worker's Compensation to their employees.
- Provide equal opportunity employment.



- Have appropriate liability insurance.
- Provide California Manual on Uniform Traffic Control Devices (CA MUTCD) approved traffic control while performing maintenance operations/work. Traffic control layout shall be approved by the City Engineer prior to the start of any work and inspected at the City Engineer's discretion.

**Site Cleanup.** Work areas shall be left in a condition equal to or better than that which existed prior to the commencement of forestry operations. All debris shall be cleaned up each day before the work crew leaves the site unless permission is given by the City to do otherwise. All lawn areas shall be raked, all street and sidewalks shall be swept, and all brush, branches, rocks, or other debris shall be removed from the site. The Contractor will be required to correct any damage caused to the roadway, sidewalk, and/or right-of-way during tree maintenance operations.

### **Planting**

Sections 12.26.050 and 12.26.060 of the Claremont Municipal Code (Appendix A) establish the conditions for all tree plantings that take place on City property or within City right-of-way. The Community Services Department shall be responsible for the planting of all City trees. The following guidelines promote sustainable urban forestry principles and arboriculture BMPs which prioritize the health, safety, and longevity, of City trees from the time that they are planted through their maturity. These specifications shall be required for any City tree that is to be planted.

**Season to Plant.** Unless otherwise approved by the Community Services Department, most planting of trees in public rights-of-way (ROW) shall take place between mid-fall and early spring to take advantage of the dormant period for most trees and the cooler, wetter seasons of the year. If a property owner, requests a tree outside of the planting season, the City can accommodate the request with a commitment from the property owner to water the tree to arboriculture BMPs and to pay for the cost of the tree and planting through the City's Residential Pay Program.

**Viable Planting Sites.** It shall be the objective of the City to plant all viable vacant sites located on City property or within City right-of-way, to honor all resident requests for new street trees in viable locations, and to replace any City tree which has been removed with the provision that the remaining vacant site is viable for planting. Viability shall be based upon the following criteria:

- **Spacing.** There is adequate spacing present overhead, underground, and radially to allow for the healthy, unimpeded growth of the tree to its mature stature. Specific examples of spacing conditions that may make a site unsuitable for planting include inappropriate canopy room between existing trees, too close a proximity of a planting site to existing water, gas or sewer lines, potential for conflict with overhead power lines, or inadequate width of the location's parkway for accommodating the tree's girth.



- **Traffic Clearance.** There is adequate line of sight visibility between normal vehicular or pedestrian traffic and necessary signage, street lights, or views.
- **Maintenance Resources.** There is an adequate and consistent water source available.
- **Funding.** There is funding available in the current fiscal year's budget for tree planting.

**Planting Large Stature Trees.** When selecting the tree species to plant in a viable vacant site, the largest stature tree from the Designated Street Tree List shall be selected. Large stature trees, in comparison to small stature trees, provide increased environmental, economic, and shade benefits. When the largest stature tree is selected for each viable planting site, canopy cover can expand with a lower quantity of trees planted.

**Replacement Trees.** Each year staff and the City's ISA Certified Arborist will determine a list of appropriate planting sites. This list will include resident requests for new trees and replacement plantings for removed trees. Staff will follow the guidelines outlined above to determine if each site is viable, and which tree species are appropriate for the location, with a goal to maximize the environmental benefits and economic values provided by selecting large stature trees while meeting the designated criteria.

**Resident Notification.** The City's ISA Certified Arborist will evaluate all potential planting sites to determine if they are viable. Properties that have a viable planting site will receive a letter confirming that the City will plant a tree at the property in the right-of-way. The notification letter will provide a timeline for planting, outline the environmental and economic benefits of City trees and provide education on proper watering methods to establish a newly planted tree. Residents will be invited to select the species of tree that will be adjacent to their property from the options available on the Designated Street Tree List. Prior to planting, the curb will be marked identifying the location for planting.

Properties that are non-responsive are less likely to water and care for a City tree, leading to high mortality rates and will therefore not receive new trees. Viable sites on non-responsive properties will be moved to the bottom of the City's planting list deferring outreach and planting to a future date.

**Nursery Stock Standards.** The City shall make every effort to ensure that it plants only vigorous, healthy trees which can easily be trained into an attractive natural form, with strong roots and good crown development. The specifications for acceptable nursery stock follow the ANSI Z60.1 standards and shall be as follows:

- All specimens shall be true to type or botanical name as ordered or shown on planting plans.
- All specimens should be of a size equivalent to that of a 15-gallon containerized tree with a trunk caliper of three quarters of an inch (.75") to one- and one-half inches (1.5"), measured at six (6") inches above the root flare.





- All specimens shall have a single, dominant leader (trunk) with a gradual taper and balanced branch distribution vertically, laterally and radially. Multi-trunk trees will not be accepted, unless specifically ordered by City staff.
- All trees shall be healthy and vigorous, have a form typical for the species or cultivar, be well rooted, and shall be properly trained for structural stability.
- The root ball of all trees shall be moist throughout and the crown and shall show no sign of moisture stress.
- All trees shall comply with Federal and State laws and regulations requiring inspection for plant disease, pests, and weeds.
- No tree shall be accepted that has been severely topped, headed back, pollarded or lion-tailed.
- No tree shall be accepted that has co-dominant stems or excessive weak branch attachments that cannot be pruned without jeopardizing the natural form of the species.
- No tree shall be accepted that is root bound, shows evidence of girdling or kinking roots, or has “knees” (roots) protruding above the soil.

The City shall reserve the right to refuse any nursery stock that does not meet these standards and may require any person who has planted such sub-standard trees, on City property or within City right-of-way, to have these trees removed and replaced at that person’s own expense.

**Planting Material Standards.** Unless otherwise approved by the Community Services Department, all City trees shall be planted using materials that meet the following criteria:

- Tree Stakes – Shall be two (2) sturdy, ten (10’) foot long lodge pole pine stakes. Stakes shall be placed on the outer edge of the root ball on either side of the tree, parallel to the curb or walkway, or perpendicular to prevailing winds.
- Staking Ties – Shall be thirty-two (32”) inch non-abrasive flexible tree ties in a figure 8, to be fastened to each stake with galvanized roofing nails. Ties will be pulled around the tree’s trunk in a manner which supports the top-heaviness of the crown but is loose enough to allow for three (3”) to four (4”) inches of movement of the tree in the wind to build trunk caliper.
- Wood Chip Mulch – A four (4”) to six (6”) inch layer of City-approved wood chip mulch shall be placed within the planting basin of the tree. A space of four (4”) to six (6”) inches shall be left between the tree’s trunk and the mulch layer, radially, to allow airflow and to restrict moisture from remaining static around the base of the trunk.

- Within urban environments root barriers may be installed to the manufacturer's specifications and under the supervision of an ISA Certified Arborist. Root barriers shall not encapsulate the tree's roots and allow a pathway without the barrier where roots can grow.

**Tree Planting Specifications.** Most nursery tree stock in California is sold in a containerized form. The following guidelines are specific for containerized stock. If utilizing bare root or balled and burlapped trees, refer to the appropriate ISA BMPs for tree planting.

All trees shall be planted immediately after the planting container has been removed. Containers shall not be cut or otherwise damaged prior to delivery of trees to the planting area.

The planting hole is one of the most important factors in establishing a healthy tree. Measure the width and depth of the root ball prior to digging. The diameter of the planting hole shall be dug at least two (2) times wider than that of the root ball. The depth of the planting hole shall be dug slightly shallower than the depth of the root ball to allow for the top two (2") inches of the root flare to remain above the finished grade.

Before placing the tree into the planting hole, tamp down the base of the hole to allow the tree to stand straight and to avoid the potential of the tree settling below the finished grade. Scarify or scrape the sides of the planting hole to break down any glazing or compaction which may have occurred from digging.

Position the tree in the hole so that the tree stands upright and the top of the root crown is slightly exposed above the grade. Then, backfill the planting hole with clean, native soil no higher than halfway up the root ball. Slightly tamp the soil to remove air pockets but be sure not to compact the soil too much. Complete the backfilling to the finish grade. Once again, tamp the soil slightly to remove air pockets.

Form a watering basin out of backfill material, approximately four (4") inches high, around the drip line of the tree. Remove all nursery stakes, ties, and ribbons from the tree, and install the planting materials as specified above. Give the tree an initial deep watering to permeate the entire root ball. Provide water to tree as water permeates soil to avoid runoff and inefficient watering.

Tree stakes and ties should be removed from the tree upon establishment into the landscape. Typically, this is between three and five years after planting. Check if a tree has established into the landscape by gently moving the trunk and observing movement of the root ball. If the root ball moves independently of the soil, the tree is not yet established and will benefit from additional time being staked. If the root ball does not move when the trunk is moved, the tree has established into landscape and stakes shall be removed. The tree's ability to develop trunk taper will be hindered and there is risk of girdling and wounding the trunk if stakes are not removed shortly after establishment.



For specific details on proper planting procedures refer to the City website at [www.ci.claremont.ca.us/trees](http://www.ci.claremont.ca.us/trees).

### **Conflict Prevention at Planting**

The first step in the process of planting new trees is to select the “right tree in the right place,” where a tree can grow into maturity without coming into conflict with surrounding infrastructure. If necessary, a redesignation of species can be made to accommodate areas of low soil volume and limited growing space.

A list of options to minimize infrastructure conflicts are included in Appendix D. Feasible options shall be considered at the time of planting to minimize future infrastructure conflicts. Not all options are feasible for every site due to cost, neighborhood characteristics, and logistics. However, all methods provide additional root growth area, reducing likelihood of root damage to sidewalks, and flexibility for tree species selection and shall be considered at the time of planting.

### **Maintaining the Tree’s Growing Space**

A tree in a natural forest will deposit mulch in the form of fallen leaves or pine needles, several inches deep at its base. Naturally occurring mulch provides nutrients while allowing air and water to permeate the soil.

In urban environments, however, residents and property owners may have reasonable concerns about preventing the growth of weeds around the base of trees and avoiding the accumulation of leaves and pine needles that may clutter walkways.

**Acceptable Methods of Mulching and Weed Suppression.** Mulching the planting area with four (4”) to six (6”) inches of wood chips or chunk bark is recommended. A space of three (3”) inches shall be left between the tree’s trunk and the mulch layer to allow airflow and to restrict moisture from remaining static water around the base of the trunk. Weed barriers, if used, should be made of permeable fabric.

**Unacceptable Methods of Weed Suppression.** Property owners shall avoid applying any landscaping material to the base of trees that will compress the soil below it or make it impermeable to air and water:

- Bricks
- Cement
- Heavy rocks or boulders
- Plastic weed barriers

Property owners shall utilize the mulch ring as a weed suppressant and visual method to easily avoid using mechanical equipment near the base of the trunk. Mechanical equipment includes lawnmowers and/or weed whackers, which can inflict significant mechanical injury to tree trunks, damaging the vascular system. When the vascular system is damaged, the trees’ ability to carry water and nutrients throughout the tree is



inhibited, causing the health of the tree to decline, potentially leading to tree mortality.

### **Watering Schedule**

Section 12.26.040 of the Claremont Municipal Code (Appendix A) defines the responsibilities of property owners with a public easement over their property. These responsibilities include providing adequate water to any City tree planted in the easement.

Newly installed trees, including low water use species, are dependent upon supplemental irrigation until established, typically for three years. Selecting tree species to plant that are designated by the WUCOLS as low or very low water users assist in water conservation efforts while allowing the urban forest to be maintained. Periods of extreme heat, wind or drought may require more or less water than recommended in these specifications.

**Deep Watering.** Watering to the root depth, sometimes referred to as “deep-watering”, is an arboriculture BMP to establish a vigorous root system to efficiently transport water throughout its life. Water and nutrient absorbing roots are typically within the first six (6”) to twelve (12”) inches of soil. Water should be applied at a slow rate and permeate into the soil before applying additional water.

The goal of deep watering is to deliver water to the lower extremity of the tree’s roots, promoting a deeper rooting of the tree and thereby reducing the tendency of roots to search for moisture at the surface. In urban environments, this produces the additional benefit of directing tree roots downward within the first twelve (12”) inches of soil, where they are less likely to interfere with hardscape at street level.

Although deep watering is always preferable, it may not be sufficient to compensate for the typical root growth patterns of some tree species. The typical root growth pattern of a species should always be taken into consideration when planting new City trees.

**Watering Newly Planted Trees.** Watering requirements for newly planted trees will vary based on species, location, time of planting, and soil conditions. Although an ISA Certified Arborist should advise on watering recommendations for specific trees whenever possible, the following recommendations generally apply:

During the first three years after a tree is planted, it shall be watered thoroughly to their root depth to arboriculture BMPs. The standard for watering newly planted fifteen (15) gallon trees is 15 gallons of water once per week, slowly applied to avoid runoff and encourage deep watering.

Newly planted trees should be watered slowly to allow the root ball to adequately absorb the available water. Water may be provided in a variety of ways:

- Applying a garden hose on a slow drip.
- Creating a “tree-well” around the base of the tree and filling it with water that can



slowly be absorbed.

- Using a drip irrigation system that is set to deliver water at least 15 gallons of water.
- Filling a plastic bladder or “tree bag” with water and allowing it to slowly release water into the ground.

The City encourages the use of water bags when new trees are planted to encourage proper deep watering practices for City trees. Water bags may be filled by property owners once per week and provide slow release, deep water saturation to newly planted trees. The water bags also provide a visual reminder to property owners to water newly planted street trees. Tree watering bags are recommended during the first two years of establishment. Depending on available funding, the City may provide water bags at the time of planting. Watering bags are also available for private purchase through local retailers, including home improvement and garden suppliers. Care shall be exercised when using water bags to ensure water is permeating into the ground and not maintaining moisture on the trunk.

**Newly Planted Trees in Drought-Tolerant Landscapes.** Newly planted trees in drought-tolerant landscapes still need water. Even if a species of tree is classified as “California native” or “drought-tolerant”, it still requires regular watering. Once the tree is established, less water will be required.

**Watering Established Trees.** Effective methods of delivering water to the roots of an established tree vary depending on several factors. However, a few basic principles apply:

- Overwatering and underwatering of trees present similar symptoms. Overwatering shall be avoided for established trees by checking the soil moisture prior to watering.
- Water slowly for longer durations. Doing so will allow more time for water to penetrate to the tree’s root system. If water begins to run off, stop watering or cut back the rate of water flow so that it permeates into the ground. Allow sufficient intervals for the soil to dry out between watering.
- Water deeply rather than frequently. Depending on the age and species of the tree, soil type, shade, sun, slope, drainage, and current temperature, appropriate watering times may vary from as frequently as every ten days to as little as once per month. To avoid over watering, even in times of high heat or drought, check soil moisture prior to applying additional water.
- Water at the tree’s “drip line.” When it is raining, most mature trees naturally shed rainwater at the perimeter of the tree’s canopy – much like an umbrella. This is the area capable of absorbing the most water and where watering efforts should be concentrated, if possible. Watering closer to the trunk is not effective and may increase the risk of disease and trunk rot.



**Tree Watering Alerts.** The Community Services Department shall prepare community education regarding tree watering needs, including watering alerts during extreme weather conditions. Alerts shall be issued through the City website and through the City's other established public communication channels. Alerts shall specify tree watering recommendations of where to water, how much to water, and how to check if a tree needs water prior to application.

## **Pruning**

The Community Services Department shall be responsible for any and all pruning of City trees. Section 12.26.090 of the Claremont Municipal Code (Appendix A) defines the custody and protections established for public trees. Tree pruning shall also meet or exceed Los Angeles County Fire standards for clearance. Further information on the Los Angeles County Fire standards can be found on the City website at [www.ci.claremont.ca.us/trees](http://www.ci.claremont.ca.us/trees).

All City trees shall be evaluated for pruning needs on a regular basis and pruned to International Society of Arboriculture (ISA), Tree Care Industry Association (TCIA), and American National Standards Institute (ANSI) Section A300 standards and BMPs. All City trees shall be pruned in a manner that will preserve their health, develop proper branching structure, and natural appearance. For specific details on proper pruning refer to the City website at [www.ci.claremont.ca.us/trees](http://www.ci.claremont.ca.us/trees).

**Pruning Techniques.** "Thinning" cuts in mature trees shall be the standard pruning technique for City trees. A thinning cut is the removal of a branch at its point of origin, or the shortening of a branch to a lateral that is large enough to assume the terminal role.

When removing a live branch, pruning cuts should be made just outside the branch bark ridge and collar. Improper pruning practices includes "flush cuts" which is made inside the branch bark ridge and collar. Flush cuts result in a larger wound which increase the time for the compartmentalization of decay in trees (CODIT), and extends the time the tree is vulnerable to pest or disease infection. If no collar is visible, the angle of the cut should approximate the angle formed by the branch bark ridge and trunk.

When removing a dead branch, the final cut should be made just outside the branch bark ridge and collar of live callus or wound wood tissue. If the collar has grown out along the branch stub, only the dead stub should be removed; the live collar should remain intact.

If it is necessary to reduce the length of a branch, the final cut should be made just beyond (without violating) the branch bark ridge of the branch being cut to. The remaining branch should be no less than one third (1/3) the diameter of the branch being removed, and with enough foliage to assume the terminal role.

Pruning cuts should be clean and smooth, leaving the bark at the edge of the cut firmly attached to the wood. The three-cut method, should be used to remove larger limbs to avoid stripping, tearing, or peeling of the bark, and to minimize unnecessary wounding.



**Prohibited Pruning Techniques.** Use of the following pruning techniques on City trees is prohibited under any circumstances:

- Topping
- Heading Back
- Stubbing
- Lion-Tailing
- Pollarding
- Rounding-Over

**Young Tree Structural Pruning.** All newly planted trees shall receive young tree maintenance approximately one-year after planting, and annually for trees where structural defects can be corrected over time as determined by an ISA Certified Arborist until they fall into the City’s grid trimming cycle. Properly trained trees have a higher potential to develop into structurally sound trees with strong branch attachments, reducing the risk of large tree part failures as they mature, and reducing the need for corrective pruning when they mature. All City trees should be trained to develop in a style consistent with each species’ natural growth pattern, rather than imposing a “standard style” on each tree. Young trees that reach a large mature size should have a sturdy, tapered trunk with well-spaced branches that are smaller in diameter than the trunk.

When providing young trees establishment care:

- Evaluate the overall condition of the tree,
- Prune to remove any dead wood,
- Selectively prune the tree to develop good branching structure,
- Ensure stakes and ties are providing adequate support for the tree,
- Remove stakes and ties once the tree is established,
- Examine the watering basin to verify that the tree is receiving adequate water,
- Rebuild the water basin if needed and reapply mulch to preserve moisture and rebuild soil as mulch decays.

**Pruning Mature Trees.** When a young tree structural pruning program is implemented a mature tree’s need for structural pruning should decrease. When trees mature, pruning should focus on maintaining tree structure, form, health and natural appearance, accomplished through one of the three methods described below. Specific details on proper pruning are included on the City website at [www.ci.claremont.ca.us/trees](http://www.ci.claremont.ca.us/trees) and include the following processes:

- **Crown cleaning**, is the removal of dead, dying, broken, diseased, crossing, weakly attached, and low-vigor branches from a tree's crown; as well as the elimination of



water sprouts, sucker growth and foreign materials from the entire tree. Crown cleaning shall be completed on an as-needed basis.

- **Crown restoration** is intended to improve structure and appearance of trees that have sprouted vigorously after being broken, topped, severely pruned using heading cuts, or through storm damage. One to three sprouts, on main branch stubs, should be selected to form a natural appearing crown. The more vigorous sprouts may need to be thinned or cut to a lateral to control length growth or ensure adequate attachment for the size of the sprout. Crown restoration may require several prunings over several years. Crown restoration shall be completed as necessary, based upon the specific condition and circumstances surrounding the tree.
- **Crown thinning** is the selective removal of branches to increase light penetration and air movement through the crown. Thinning opens the foliage of the tree, reduces weight on heavy limbs, distributes ensuing invigoration throughout the tree and helps retain the tree's natural form.

When thinning the crown of mature trees, no more than necessary to complete the objective shall be removed. In slower growing or particularly sensitive species (such as native Oaks), no more than ten percent (10%) of live growth should be removed. Trees shall always be thinned to their natural form and should retain well-spaced inner lateral branches with foliage. Trees and branches so pruned will have mechanical stress more evenly distributed along the branch and throughout the tree.

**Pruning Cycles.** Frequency of pruning is also important to a tree maintenance program. The frequency for tree pruning should be based upon that species' growth rate, growth pattern, propensity to breakage, and susceptibility to environmental factors. Each City tree shall be inspected and pruned as necessary, or as program funds allow. Funded pruning cycles shall not preclude any necessary maintenance that may be required on individual trees.

**Tree Care for Birds and Other Wildlife.** Tree maintenance occurs throughout the year to ensure a safe urban forest for the community. The Claremont community is among the first to provide guidelines for their tree maintenance program concerning tree care for birds and other wildlife with a goal to minimize impacts of tree care to wildlife.

All persons performing tree care activities shall be familiar with the Western Chapter ISA BMP for Tree Care for Birds and Other Wildlife and should receive training to identify a nest in a tree. Prior to starting work on a tree, a pre-work inspection of trees for nests shall be performed. Ensuring a wildlife biologist or wildlife trained arborist is present at the project site during nesting season (February to August) provides further expertise in minimizing impacts of tree care to wildlife.

**Resident Notification.** Residents shall be notified of any large-scale pruning project affecting a City tree located in front of their home.

**Street, Sidewalk and Visibility Clearance.** Street, sidewalk, traffic signal, and street





sign clearance standards shall be achieved through crown raising. Crown raising is the removal of lower branches to provide clearance for vehicles, pedestrians, and bicyclists. Crown raising practices are in line with specifications from the 7th Edition of the Highway Design Manual (HDM) from the California Department of Transportation (Caltrans). Only those branches that must be removed to achieve the established height clearance standard shall be pruned. All such pruning cuts shall be made back to the nearest lateral found above the set minimum height standard. Where possible, young or developing trees should be maintained in such a manner that at least one half (1/2) of the foliage should be on branches that originate in the lower two thirds (2/3) of the tree. Similarly, branches should have even distribution of foliage along their lengths. This will ensure a well formed, tapered structure and will uniformly distribute stress within the tree.

All City trees shall be maintained to the height clearance specifications established below:

- **Over sidewalks, walkways, or park paths**, limbs shall be raised to a minimum of eight (8') feet from lower foliage of overhanging branches for pedestrian passage. In locations where no sidewalks exist, limbs may be retained below this minimum elevation so long as they conform to the natural shape of the species. In locations where City street trees are set back from, or do not interfere with, sidewalk traffic, limbs may also be retained below this minimum height specification.
- **Over bike paths**, minimum of eight (8') feet over bike path and seven (7') feet over shoulder. Where practical, a vertical clearance of ten (10') feet is desirable.
- **Over traveled way and shoulder**, limbs shall be raised to seventeen (17') feet from the pavement to the lower foliage of overhanging branches. Select streets may require a higher maximum over traffic lanes for existing mature canopy-forming limbs.

Trees must be located to not visually restrict existing roadside signs and signals. Only those branches that need to be removed to attain the visibility clearance desired shall be pruned. All such pruning cuts shall be thinned back to the nearest lateral found away from the structure, streetlights, or signage that is to be cleared.

**Utility Clearance Pruning.** In general line clearance is performed by utility companies. Line clearance tree workers must be trained to work safely around high voltage conductors. The United States Occupational Safety and Health Act (OSHA) and the American National Standards Institute (ANSI) have established minimum distances to be maintained by tree workers from electrical conductors. All line clearance work involving City trees shall adhere to these standards, as well as the utility pruning standards established by the International Society of Arboriculture (ISA) and the Utility Arborists Association (UAA). General Order 95, Rule 35 of the California Public Utilities Commission (CPUC) mandates that trees must maintain an eighteen (18") inch radial clearance from high voltage transmission lines.

The following guidelines are designed to maintain the required clearance of City trees from high voltage transmission lines with a minimum of resprouting and fewer pruning cycles. These guidelines are based upon known tree responses to various pruning



techniques. In no sense should they take precedence over safe work practices.

- As few cuts as reasonable to achieve the required clearances.
- Limbs should not be arbitrarily pruned based on a pre-established clearing limit.
- A tree's growth under utility lines is most economically managed by lateral or directional pruning (thinning cuts). Directional pruning (V-notching) is the removal of a branch to the trunk or a significant lateral branch growing away from the conductor. Heading cuts (topping), on the other hand, encourage vigorous sprouting and increase the frequency of pruning cycles and the cost of maintenance. Heading cuts are prohibited on City-owned trees.
- All trees should be examined for hazards before commencing with line clearance work.
- Hangers and dead wood should be removed.
- Where possible, the tree should be allowed to attain normal height, with crown development maturing away from high voltage conductors.
- Pruning should be restricted to removal of branches at crotches within the tree's crown.
- When the pruning of a branch will result in the loss of more than one half (1/2) of the foliage on the branch, it should be removed to the parent stem.
- The three-cut method shall be used when removing large limbs to avoid stripping or tearing the bark, and to minimize unnecessary wounding.
- Heavy limbs should be lowered on ropes (rigged) to avoid damaging bark on limbs and trunks below.
- The placement of pruning cuts shall be determined by anatomy, structure and branching habit.
- Final drop-crotch cuts should be made outside the branch bark ridge on the main stem or lateral branch. The remaining branch shall be no smaller than one third (1/3) the diameter of the portion being removed. The removed portion should be pruned to direct the remaining growth away from conductors.
- The use of multiple, small-diameter shaping cuts to create an artificially uniform crown form, commonly known as a "round over", or a hedged side-wall effect, is not cost effective nor consistent with proper pruning practice. Both round overs and the topping of trees for line clearance shall be prohibited in the City of Claremont.



**Root Pruning.** The root system of a tree is one of its most important physiological components. Roots are the main source of water and mineral absorption, provide anchorage and stability, and act as one of the principal storage areas for food. The proper pruning of a tree's roots is as important as the proper pruning of a tree's crown.

Whenever possible, the City shall avoid removing any of a tree's root system. In instances where there exists a need to install subsurface structures or utilities, such as irrigation lines or block wall footings, every effort shall be made to avoid encroachment within the drip line of a tree. If it becomes necessary to excavate within a tree's drip line, every effort shall be made to tunnel under or through the tree's root system with a minimal amount of pruning, rather than to trench across the tree's roots. A guide to proper root pruning is available on the City website at [www.ci.claremont.ca.us](http://www.ci.claremont.ca.us).

If root pruning is deemed necessary, the first consideration is the tree's health and if the tree is vigorous enough to recover from root pruning. An ISA Certified Arborist shall perform a health assessment of each tree considered for root pruning. If a tree is determined healthy and vigorous enough to tolerate root pruning, the following assessment, performed by an ISA Certified Arborist, is necessary to determine if root pruning is feasible while maintaining safety of the tree.

1. Determine root type.
2. Do roots need to be cut more than 90 degrees of the tree's radius?
3. Are conflicting roots within a distance three times the DSH of the tree?
4. Are conflicting roots greater than three (3") inches in diameter?

When the root type is determined to be nonstructural and all remaining root pruning questions above are determined 'no', then root pruning may be performed. All root pruning assessments and root pruning shall be performed by an ISA Certified Arborist.

**Hardscape.** The City will consider all options to mitigate tree and infrastructure conflict prior to considering the tree as a candidate for removal. When root removal becomes necessary for the installation or repair of hardscape, such as sidewalks, driveway approaches or curb and gutters, two methods shall be employed by the City to address invasive or encroaching roots. Root pruning shall only be performed when the tree qualifies for root pruning through the assessment outlined above. If the tree does not satisfy the criteria described above, the tree is not a candidate for root pruning and shall be considered for removal. These two methods are specified below and are detailed on the City website at [www.claremont.ca.us/trees](http://www.claremont.ca.us/trees).

- **Selective Root Pruning** is the removal of specific offending roots which are directly interfering with a work area. When pruning selective roots, retain as much root surface as possible, including sufficient buttress root dispersal around the radius of the tree. If more than 25% of a tree's root system must be removed, the tree shall be considered a candidate for removal. Roots shall be cut back at least four (4") inches



away from new hardscape to the nearest node. Pruning cuts shall be made clean and smooth with no crushing or tearing of the remaining root.

- **Root Shaving** is the removal of a small portion of a nonessential buttress root or general root with a diameter of four (4") inches or greater. Roots will be shaved down to allow for at least two (2") inches of clearance between the root and the new hardscape. No more than one third (1/3) of a root's diameter shall be shaved off. Shaving cuts shall be made clean and smooth with no crushing or tearing of the remaining root.

Soil shall be backfilled immediately following pruning or shaving activity to minimize drying of the roots. Any root pruning or shaving shall be approved by an ISA Certified Arborist.

**Preventing the Spread of Disease.** Any pruning of diseased trees shall follow best management practices, including sterilizing pruning tools after each cut. Green waste infected with disease shall not be comingled with clean green waste and shall be heated to kill pathogens prior to disposal.

### **Pest and Disease Management**

There are many regularly occurring pests and diseases found in urban landscapes. These can include, but are not limited to, aphids, scales, lerps, sharpshooters, white-fly, caterpillars, acorn weevils, powdery mildew, sooty mold, or anthracnose. These pests and diseases can create unsightly and/or nuisance symptoms in susceptible tree species. Symptoms can include honeydew/sap drop, skeletonized leaves, leaf curl/necrosis, or premature leaf drop.

Pests and diseases of this nature alone are not considered immediately detrimental to the long-term health of the tree or urban forest. Eradication of these regularly occurring pests or diseases is not feasible in a broad setting such as an urban forest. Because of this, chemical applications are not always practical or financially feasible. The City will consider treatment for pests and diseases that affect the health and safety of a tree, not for aesthetic or nuisance complaints. Consideration for treatment will be considered on a case-by- case basis.

The best way to reduce pest problems is to use Best Management Practices during the planting, pruning, and care of the trees to promote optimum health. Vigorous, healthy, well-watered trees have natural defense mechanisms that can withstand certain levels of pest and disease infestations.

**Integrated Pest Management (IPM).** In situations when more aggressive or newly introduced invasive pests and diseases are identified in the urban forest, additional control measures may be warranted to limit the establishment of these new threats in the urban forest. When these pests or pathogens are discovered, Claremont follows generally accepted Integrated Pest Management (IPM) techniques.

IPM is a process used to solve pest problems while minimizing risks to people and the



environment. Approaches for managing pests are often grouped in the following categories:

- **Cultural Controls:** Cultural controls are preventative practices that reduce pest establishment, reproduction, dispersal, and survival by providing a growing environment favorable for the host plant and unfavorable to pests.
- **Mechanical and Physical Controls:** Mechanical and physical controls eliminate a pest directly or make an unsuitable environment for the identified pest
- **Biological Control:** Biological control is the use of beneficial organisms like natural predators, parasites, or pathogens to control and manage pests and their damage.
- **Chemical Control:** Chemical control is the use of conventional, manufactured pesticides to control, prevent, or repel pests. The least hazardous and selective pesticide will always be utilized first for the identified pest. Further, a pesticide will only be applied in a discerning manner that targets the specific pest of concern while avoiding exposure to non- targets. Where applicable, selective treatments will be applied in combination with other IPM measures for more effective, long-term control.

## **Removal**

The City's policy is to protect and preserve healthy trees whenever possible to preserve the valuable benefits to our environment and increase the quality of life in Claremont. Section 12.26.090 of the Claremont Municipal Code (Appendix A) defines the custody and protections established for all City trees.

The Community Services Department shall be responsible for all removals of City trees. Upon tree inspection, the City shall first consider all feasible mitigation options prior to tree removal. Removal shall be avoided if mitigation can reduce tree risk to an acceptable level. However, if removal is determined to be necessary, the tree will either be categorized as a "Emergency Removal," or a "Standard Removal." Emergency Removals and Standard Removals will differ in notification procedures to the community as described below in this section. To mitigate for removed trees, the City encourages the planting of a same- or larger- stature tree for each tree removed within the next planting season, unless otherwise determined a non-viable site. The largest stature tree suited for each specific planting site shall be planted.

**Emergency Removals.** A tree removal can be categorized as an Emergency Removal if it is deemed 'Hazardous', 'Dead/Severely Declining', 'Timely', or 'Public Safety' removals. A tree may be categorized as a 'Hazardous Tree' after a risk assessment by an ISA Certified Arborist utilizing the Tree Risk Assessment Qualification (TRAQ) program, and risk mitigation will not lower the risk to an acceptable level as determined by the City. A tree may be categorized as 'Dead/ Severely Declining,' 'Timely Removal', or 'Public Safety,' and be eligible for removal, after a tree health inspection and mitigation options are determined unfeasible. The department shall have the authority to remove a City tree without further inspection or prior notice to the public based upon the following conditions



of each Emergency Removal:

**Hazardous Trees.** The Community Services Department shall identify potentially hazardous trees based on, but not limited to, the severity of the following conditions:

- Large dead branches in the tree.
- Cavities or rotten wood along the trunk or in major branches.
- Mushrooms or conks present at the base of the tree.
- Fractures or splits in the trunk.
- Fractures or splits at the crotch or branch attachment.
- Strong, uncorrected lean at the trunk with lifting soil.
- Multiple branches with poor attachments arise from one point on the trunk.
- Damaged, broken, or injured roots.
- Tree has been topped or otherwise heavily pruned resulting in poor structure.

**Hazardous Trees Inspection.** Before a tree is deemed hazardous, an ISA Certified Arborist with the Tree Risk Assessment Qualification (TRAQ) shall perform a Level 2 assessment to determine the level of risk and possible mitigation options. In some instances, it may be appropriate to perform a Level 3 assessment utilizing special equipment to further inform the process of determining risk. Once mitigation options are determined to not reduce risk to an acceptable level, the remaining risk level determines if a tree is hazardous.

**Dead/Severely Declining Trees.** Street and park trees that are dead or have been determined by an ISA Certified Arborist to be in a state of severe decline, shall be scheduled for removal. Severe decline includes, but is not limited to, trees containing pests or pathogens that cannot be managed or pose a threat to the urban forest, water-stress, decay, compromised root systems, or mechanical injury, where recovery from treatment is determined unlikely.

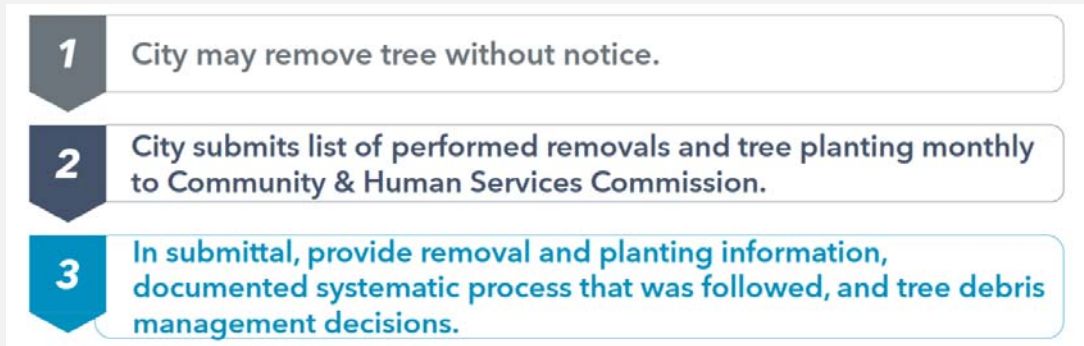
Due to their wildlife habitat value, dead and dying trees located in City-owned open space or natural areas shall not be removed unless they pose an immediate hazard or other reasons that warrant their removal.

**Timely Removals.** Healthy trees may be removed if tree removal is the only feasible option to alleviate emergency conditions determined by the City. Timely removals shall be inspected for potential mitigation methods by an ISA Certified Arborist prior to the removal, if feasible in the context and timeline of the emergency condition. A tree determined to be in imminent failure shall be considered a timely removal.

**Public Safety.** Healthy trees may be removed if the Community Services Department determines that a public safety concern exists, and tree removal is determined to be the only feasible option.

**Notification Procedure for Emergency Removals.** When trees are categorized as a 'Standard Removal' the following notification procedure shall be followed (See Exhibit 1):

**Exhibit 1.** Emergency Removals - Notification Procedure.



Source: Dudek 2024.

**Standard Removals.** Removals that do not meet the criteria of Emergency Removals will be considered a “Standard Removal.” A tree condition assessment with documentation shall be performed for each tree removal proposed. Tree removals categorized under the Standard Removal procedure, are outlined below:

**Diseased/Insect Infested Trees.** Not all pests or pathogens lead to tree mortality and failure. A tree will be preserved if the identified pest or pathogen is a nuisance but does not threaten the health of the individual tree or overall urban forest. Considerations for removal of diseased or insect infested trees include, but are not limited to:

- No known cure or remediation of said pest or pathogen.
- Infested tree is experiencing severe decline without potential for recovery.

The Integrated Pest Management plan included in this Manual should be followed when considering the above criteria for removing diseased or insect infested trees.

**Hardscape/Infrastructure/Building Damage.** If hardscape/infrastructure/building repairs cannot be completed without severe root pruning, which would jeopardize the health and stability of the tree, the tree may be removed only after all mitigation measures have been considered utilizing the charts in Exhibit 2 and Exhibit 3. Exhibit 2 and Exhibit



3, show a methodology to determine whether an infrastructure can be mitigated to preserve the tree.

**Excessive/Reoccurring Property Damage.** Community Services shall have the authority to remove a tree causing hardscape/infrastructure/building damage if the cost of repairs is greater than the value of the tree or if the cumulative value of repairs outweighs the value of the tree. Trees causing re-occurring damage shall be reviewed for removal and replacement with new tree species appropriate for the location.

**Americans with Disabilities Act (ADA) Compliance.** The Americans with Disabilities Act (ADA) is a set of federal laws setting guidelines to ensure accessibility for all peoples. If a tree is causing an ADA compliance issue, all mitigation efforts shall be considered prior to removal. If ADA compliance cannot be met when considering all mitigation options, the tree shall then be removed, and repairs made to meet compliance. The City will follow the 2010 ADA Standards for Accessible Design when considering mitigation options and tree removal. Following removal, Community Services will consider the opportunity for replanting using the “right tree, right place” philosophy.

If the planting site is still considered viable, all hardscape must be repaired and/or installed prior to replanting a new tree. Considerations for installing site appropriate conflict prevention measures at the time of planting, found in Appendix D, shall be analyzed for feasibility.

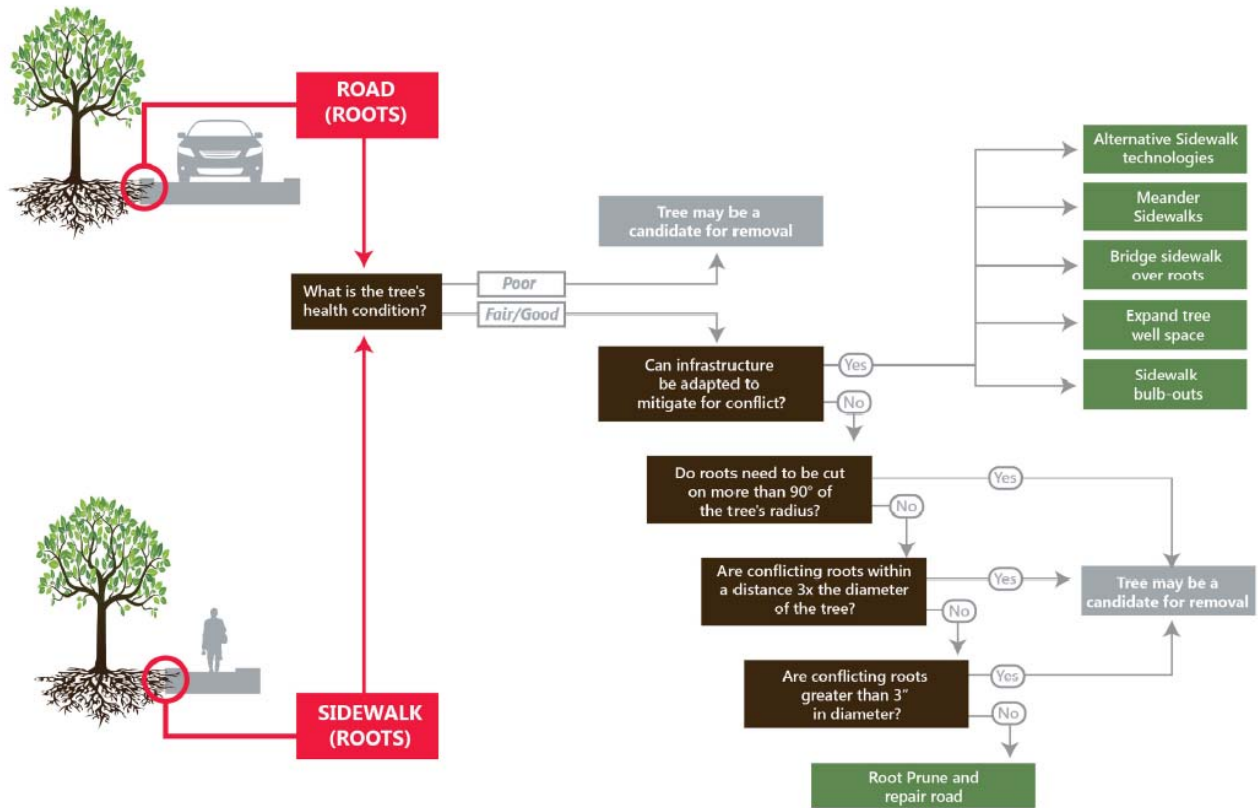
**Volunteer Trees.** Volunteer trees are seedlings that grow without being planted. Due to the nature of volunteer seedlings, volunteers sometimes grow in sites that cannot accommodate trees at mature stature. When volunteer trees arise within the City’s right-of-way, an ISA Certified Arborist shall inspect the volunteer tree’s location and determine if the tree at maturity will grow without causing potential below or above ground infrastructure conflicts. If upon inspection, the volunteer tree is determined likely to outgrow its site, the volunteer tree shall be removed. Additionally, if the volunteer tree does not meet the qualities listed below, and young tree structural pruning is unlikely to easily train a structurally sound tree, as determined by an ISA Certified Arborist, the volunteer tree shall be removed.

- All specimens shall have a single, dominant leader (trunk) and balanced branch distribution vertically, laterally and radially.
- Tree shall have a gradual taper if applicable at the time of inspection.
- All trees shall be healthy and vigorous, have a form typical for the species or cultivar, and shall be properly trained for structural stability.
- Tree contains co-dominant stems, multiple trunks, or excessive weak branch attachments that cannot be pruned without jeopardizing the natural form of the species.



**Exhibit 2. Root Conflict with Roadways and Sidewalks- Mitigation Decision Chart.**

**What to do for tree ROOT conflicts with ROADWAYS and SIDEWALKS**

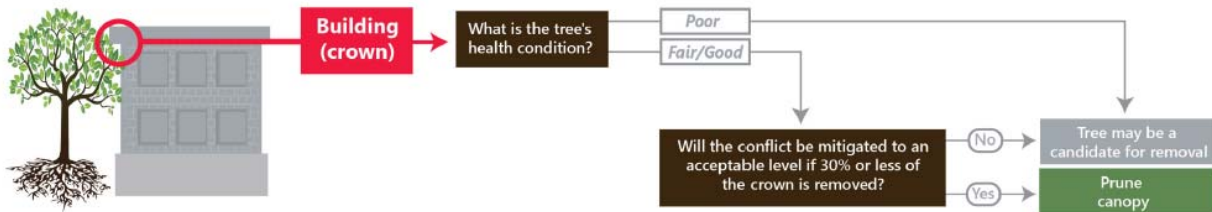


Source: Dudek 2024.

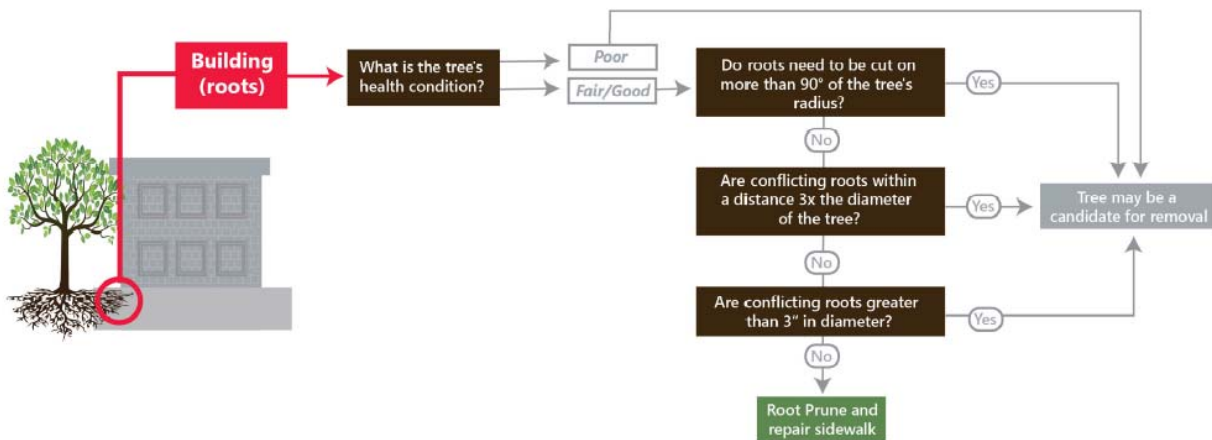


**Exhibit 3. Crown Conflicts with Buildings – Mitigation Decision Chart.**

**What to do for tree CROWN and BUILDING conflicts**



**What to do for tree ROOT and BUILDING conflicts**



Source: Dudek 2024.

**Hardscape Installation Guidelines on Public Property.** The general policy that shall be observed when repairing or replacing hardscape adjacent to a City tree is that the health and integrity of the tree take precedent over the installation of concrete or asphalt. Every effort shall be made to protect the tree from root or trunk damage. Should a tree health assessment determine that hardscape repair will compromise the ability of the existing tree to recover, the tree shall be considered for removal utilizing the charts in Exhibit 2 and Exhibit 3.

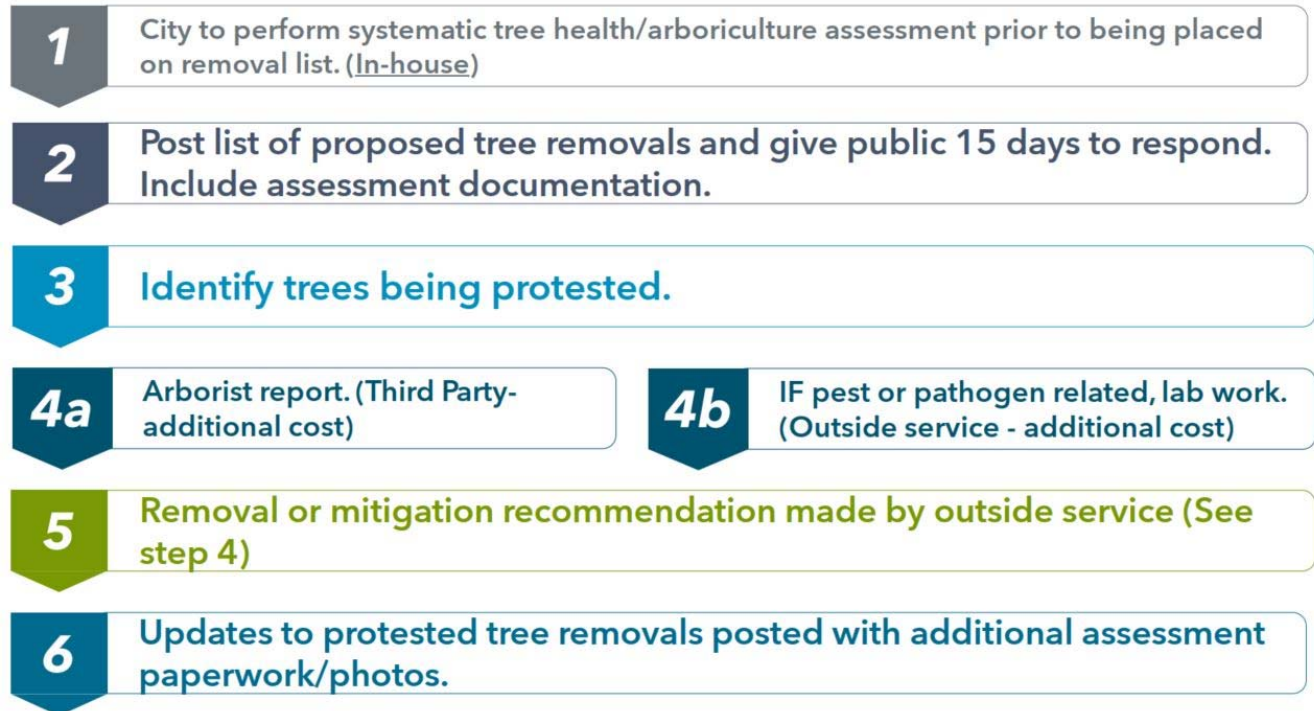
**Mitigation Methods for Tree and Infrastructure Conflict.** Several mitigation methods are available for accommodating the installation of new hardscape or providing resolution to a tree and infrastructure conflict. These methods are included in Appendix E. Not all mitigation methods are feasible: location, cost, Americans with Disabilities (ADA) requirements, the latest Public Right of Way Accessibility Guidelines (PROWAG) guidelines, and traffic safety must be considered. The resolutions in Appendix E may be



used when tree roots and hardscape conflict with intent to preserve the existing tree.

**Notification Procedure for Standard Removals.** When trees are categorized as a 'Standard Removal' the following notification procedure shall be followed (See Exhibit 4):

Exhibit 4. Standard Removals – Notification Procedure.



Source: Dudek 2024.

Step 2 of Exhibit 4 shall entail a comprehensive list of recommended tree removals with the tree assessment form, a photo, and work history.

All objections must be submitted on the City’s website within the 15-day response period (Step 3 of Exhibit 4).

In addition to Step 6 in Exhibit 4, findings from the third party will be reported to the Tree Committee for discussion and as a recommendation to the Community and Human Services Commission. The Community and Human Services Commission will make the final determination.

**Programmed Tree Removal and Replacement Program:** To minimize deforestation, a programmed removal and replacement program may be proposed by the Community Services Director or their designee. When considering a Tree Removal and Replacement Program, the severity of the following shall be evaluated:



- Threat to the urban forest.
- Neighborhood impacts.
- Grow space.
- Species and climate appropriateness.
- Age of trees.
- Condition of trees.
- Cost to repair hardscape damage.
- Conflicts with public infrastructure such as bike lanes, sidewalks, and/or handicap ramps.
- Severity and frequency of reoccurring hardscape damage.

When considering a programmed removal, several factors should be determined. First, all mitigating efforts should be explored. If all mitigating efforts are deemed unfeasible, a multi-year removal plan should be scheduled. Begin removing trees in the severest state of decline as determined by an ISA Certified Arborist. Secondly, remove trees in an organized fashion to ensure the streetscape remains intact. Lastly, an immediate replacement plan should be implemented, with an emphasis on planting the “right tree in the right place”. Any plan proposed for phased removal of trees in a defined area must be specifically crafted to meet the needs of the area. Such a proposal must be presented to affected residents as a notice or community meeting. In addition, programmed Tree Removal and Replacement Programs must be reviewed by the Tree Committee and Community and Human Services Commission and approved by the City Council prior to implementation.

**Reasons NOT Valid for Tree Removal:**

- Nuisance debris.
- Messy fruit.
- Nuisances created from non-lethal pests and diseases.
- Roots getting into the sewer lines resulting from deteriorating infrastructure.
- Hardscape damage if a feasible, economic solution exists to save the tree.
- General dislike of certain species or variety of tree.



- Surface root intrusion.
- Converting to water-wise landscaping.

**City Trees and Solar Panels.** The City complies with existing solar access regulations in the State of California, including The Solar Rights Act (AB3250) and The Solar Shade Act (AB2321). The Solar Shade Act prohibits shading of solar collectors that result from tree growth occurring after a solar collector is installed. It states that no plant may be placed or allowed to grow such that it shades a collector more than 10% from 10 am to 2 pm. It does not apply to plants already in place or replacement of plants that die after the installation of the solar collectors.

**Unauthorized Trimming and Removal.** According to section 12.26.090 of the Claremont Municipal Code, it is unlawful for any person to injure, cut, damage, carve, transplant, prune, root prune, or remove any public tree. Procedures for addressing violations are outlined in section 12.26.110 of the Claremont Municipal Code.

**Property Owner Request for Removals.** Periodically, property owners approach the City with requests to remove a City tree that is located within the public right-of-way on their property. Community Services staff and a staff ISA Certified Arborist have the authority to approve these requests only if the tree is dead, in advanced decline, critically diseased, hazardous, or an emergency condition exists, as referenced above; otherwise, staff will deny the request. Property owners may appeal the staff denial by written request, which shall be brought before the Tree Committee and Community and Human Services Commission. Per Municipal Code Section 12.26.020 (B) “the Commission may grant an appeal if it finds that the staff decision would result in a burden on the property owner that substantially outweighs the benefit to the public. The Commission’s decision may be appealed to the City Council if a written appeal, setting forth the grounds, is filed with the City Clerk within ten days of the Commission decision. If no timely appeal is filed, the decision shall be final.”

Community Services staff shall provide all interested parties with information on the committee and commission review process. Any tree removal requests brought forth to the Tree Committee and Commission shall be evaluated by staff and an ISA Certified Arborist. The Community and Human Services Commission will evaluate tree removal requests individually, considering any of these factors listed below to determine if tree’s removal represents a greater loss to the public than the burden placed on the property owner by its continued existence:

- Species of the tree. Does the tree’s species further the City’s urban forest management goals?
- Size of the tree. Does the tree’s size provide significant value in terms of shade, tree canopy, and neighborhood character?
- Approximate age of the tree. Whether the tree is young, mature, or near the end of its life cycle may be considered.



- Health of the tree. Is the tree in good health or it is showing signs of advanced decline or approaching the end of its life?
- Physical characteristics of the tree. Does the tree have species appropriate structure and form that suggests structural integrity?
- Environmental productivity of the tree. Is the tree believed to be environmentally productive or has productivity likely declined due to age, condition, or poor health?
- Safety of the property owner and general public will be considered. The Commission may consider health and safety impacts for the residents, adjacent property owners, and public at large when evaluating a removal request.
- Asset value of the tree. The value of the tree as listed in the City's inventory shall be included in the information presented to the Commission.
- Utility conflicts, both above and below ground, public or private, may be considered when evaluating a removal request.
- Species and age diversification may be considered to determine if the street would benefit from having a more diverse street tree population to reduce threats of deforestation.

Consistent with previous sections of the Manual, trees may not be approved for removal based on leaves getting into gutters or a nuisance to remove, messy fruit or tree debris, roots getting into the sewer lines as a result of deteriorating infrastructure, hardscape damage if a feasible, economic solution exists to save the tree, or if an existing City tree is blocking solar panels.

If a property owner requests a tree removal and the request is approved by the Community and Human Services Commission, the property owner will be required to pay for the subsequent removal and the replanting of two 24"-box size replacement tree. This is not to say both trees will be planted on the subject property. Trees will be planted as the site permits. This practice is intended to contribute to the growth of the City's urban forest. Information regarding this requirement will be made available to the property owner prior to the commission process. Costs will be determined based upon the City's current contract rates for removal and planting. A viable planting site for the replacement tree will be determined by an ISA Certified Arborist. The accepted planting site may or may not be adjacent to the removed tree or on the same property. Property owners may appeal the requirement to pay for the requested removal and replanting of replacement tree(s) if they are able to demonstrate financial hardship.

**Resident/Merchant Notification.** To encourage public participation, City staff will post a notice on the affected right-of-way (ROW) tree no less than 72 hours prior to review by the Tree Committee and Community and Human Services Commission. The notice will include information on the proposed removal/property owner appeal and meeting dates,



times, and locations. Agendas for Tree Committee and Community and Human Services Commission meetings will be posted a minimum of 72 hours prior to the meeting date for public review. Interested residents/merchants are invited to make public comment at the meetings or submit written comments for consideration.

The Community Services Department may or may not be able to notify the adjacent homeowner of emergency and hazardous tree removals due to the degree of urgency during these events. A list of newly planted and removed trees will be brought to the Community and Human Services Commission on a monthly basis as a receive and file item for information purposes.

**Open Space.** Portions of the urban forest that abut open space will meet or exceed the Los Angeles County fire clearance standards. The City also maintains open space that abuts properties in accordance with the Los Angeles County Department of Agriculture Commissioner/Weights and Measures annual weed abatement and brush clearance standards. This includes clearance of brush, dry weeds, or dry vegetation within 100 feet up to 200 feet from a home or structure.

## PRIVATE PROPERTY OWNERS AND RESIDENTS

**Private Property Hardscape Installation Guidelines.** The same general policy for hardscape installation on public property shall be applied to private property. Every effort shall be made to protect the tree from root or trunk damage. To mitigate future hardscape damage, hardscape on private property shall not be installed within three (3') feet of the base of a City tree.

### **Private Property Hardscape Damage Response Procedure.**

- Hardscape damage is on private property and thereby cannot be addressed by City crews. However, there are clear-cut indications that at least some of the damage has occurred as a direct result of a City tree. Thus, the property owner may have reason to file a claim for damages with the City Clerk.

If the property owner does elect to file a claim, the Community Services Department and/or an ISA Certified Arborist shall be responsible for evaluating the damaged area and submitting a Tree Assessment Report to the City Clerk for inclusion with the claim file. In this case, property owners will be expected to pay for report submission fees.

- Hardscape damage is on private property and thereby cannot be addressed by City crews. When no clear-cut indications exist that a City tree is the source of the damages, the property owner shall be responsible for excavation of the damaged area for the purpose of exposing any invasive roots, should they wish to file a claim for damages with the City.

Upon excavation of the area, it is the property owner's responsibility to contact the



Community Services Department and schedule an evaluation and assessment of the damage. The Community Services Department shall be responsible for submitting this assessment report to the City Clerk for inclusion with the property owner's claim.

- Hardscape damage is on private property and is clearly not caused by a City-owned street tree; therefore, the City is not responsible for damages or repairs.

Once a course of action has been determined, staff shall be responsible for providing written notification to the City Clerk's office informing them of the findings and the measures needed to rectify the problem.

**Private Contracting.** For any work performed on privately owned trees, the City recommends that residents:

- Only hire tree companies that employ an ISA-Certified Arborist.
- Require proof of proper licensing and insurance.
- Obtain several references before employing any company.
- Consult the ISA website ([www.treesaregood.org](http://www.treesaregood.org)) and inform themselves of ISA-recommended procedures for pruning young or mature trees, as applicable.
- May require a traffic control permit from the Engineering Division.

## CLAIMS

In keeping with the City's policies for protecting and preserving the health and well-being of our community forest while providing safety of our citizens, the following guidelines have been established for correcting potentially hazardous situations that result from tree roots disturbing nearby hardscape.

### **Hardscape Damage Response Procedures**

There are several factors that must be considered in determining the course of action necessary for addressing hardscape damage concerns that involve City trees. These actions are driven by the extent of the damages, and whether the damages are located on private or public property.

The Community Services Department shall delegate the initial inspection of all hardscape damage to appropriate staff. If the hardscape concerns include potential damage to private property, the matter shall be referred to the Community Services Department's claim representative for evaluation. A Community Services Department Inspection Checklist is to be used by the claim representative for such tree assessments.



Upon initial inspection of the area, staff must determine what course of action is necessary to respond to the problem. The following are the most commonly occurring hardscape problems, and the courses of action that shall be employed to rectify them:

**Public Property.** Hardscape damage on sidewalks shall require a temporary asphalt ramp, followed by permanent repair of the area at a later date.

Hardscape damage is on public property other than sidewalks, but the nature of the damages cannot be rectified by temporary measures. Thus, areas in need of permanent repair shall be immediately placed on the repair schedule based upon the potential the damages have for creating a public safety hazard.

## TREE DONATIONS

The Community Services Department shall make available to interested property owners, residents and others, the City's Gift Policy to encourage the donation of funds or trees to enhance the community forest. All donations of trees to the City must meet certain qualifications and restrictions set by the Community Services Department. Likewise, the department must follow certain procedures in the receiving of such gifts.

All tree donations shall be accepted only under the terms stated in Administrative Policy 10-12.

Trees may be donated to the City for planting in City parks or within City rights-of-way. The City shall make every effort to have the tree planted where the donor wishes, but may not always be able to plant a certain tree in a certain place.

### **Standard Tree Donations**

Standard tree donations may be in the form of monetary gifts funded specifically for the purchase and planting of a tree, or the donation may be a tree itself pending approval by the Community Services Department.

The general amount necessary for a monetary tree donation gift must cover the current average cost for a 15-gallon containerized tree with a trunk caliper of one- and one-half inches (1.5"), or greater, all necessary planting materials, as well as the labor costs involved in planting the tree. The current average cost for tree planting shall be determined by the ISA Certified Arborist and approved by the Director of Community Services.

All donated trees shall be approved by the ISA Certified Arborist only after the proposed tree and location have been reviewed in light of the Designated Street Tree List and the Nursery Stock Standards described in this manual.

Tree donations valued at less than \$500 shall be approved by the Director of Community



Services. Tree donations valued at more than \$500 are subject to review by the Community and Human Services Commission, unless specifically waived by the City Manager. The City Manager shall make the final determination.

It is the responsibility of the Community Services Department to complete a proposed "Gift to the City" form for all tree donations, including acquiring necessary donor information and signatures. The completed original form shall be forwarded to the City's Finance Department. One copy of the completed form shall be returned to the donor, and one copy shall be retained by the Community Services Department.

Acceptance of donations implies no reciprocal agreement or obligation to the donor by the City other than designation of donated funds for specific tree gifts. Any tree accepted by the City becomes the property of the City and shall be subject to all the policies described in this Manual.

It shall be the responsibility of the Director of Community Services to convey acceptance or non-acceptance of tree gifts to the donor within two weeks. If a donation requires lengthy review and approval, the donor shall be notified of such proceedings.

Recognition may be made to the donor through media coverage or other appropriate activities only with the consent of the donor.

### **Oak Park Cemetery Memorial Tree Program**

The Oak Park Cemetery Memorial Tree Program is a donation program limited to the planting of trees on the grounds of the City's Oak Park Cemetery. Interested donors will be given a Memorial Tree Program application form informing them of the procedures, prices, species of trees, and locations available for their donation. Memorial tree donations shall be subject to the same conditions as standard tree donations, with the following amendments.

Memorial tree donations should generally be made through the Friends of Oak Park Cemetery. Location and species of donated trees will be selected by the donor from the list detailed on the reverse side of the application form. The tree list is subject to revision depending upon the availability of space in each cemetery quadrant. The donor's selections shall be reviewed by an ISA Certified Arborist, prior to approval.

The Friends of Oak Park Cemetery shall be responsible for providing to the donor a certificate acknowledging the gift.

The Oak Park Cemetery Memorial Tree Program is temporarily suspended pending future development.

### **Plaques**

The City does not allow the permanent installation of plaques for donated trees. However, the City Council may approve permanent plaques in situations where it is determined that the plaque would be of benefit to the community.

## PERMITS

Section 12.26.070 of the Claremont Municipal Code (Appendix A) sets the conditions for the acquisition of a permit for any work involving City trees. No person shall plant or otherwise disturb any City tree without first obtaining a permit from the Community Services Department.

Applications for permits must be made to the Community Services Department on forms provided by the department and shall include such information as the Director of Community Services deems necessary to review the application. The tree permit form is available on the City website at [www.ca.claremont.ca.us/trees](http://www.ca.claremont.ca.us/trees).

Any business wishing to acquire a permit for tree planting must provide an official copy of a current City of Claremont Business License at the time of application.

The Community Services Department shall issue the permit if the proposed work is desirable and the proposed method and workmanship are performed to the standards defined under the Maintenance Guidelines described in this Manual. Any permit granted shall contain a date of expiration and the work shall be completed in the time allowed on the permit and in the manner described in it. A permit shall be null and void if its terms are violated.

Permittees shall be required to have a copy of the permit, and a current Claremont Business License (if applicable), present at all times at the work site. Work undertaken by the permittee or their agents may be stopped immediately and the permittee's permit may be revoked by oral or written order of Director of Community Services if it is determined that the program of work or conditions outlined in the permit are not being complied with.

As described in Section 12.26.080 of the Claremont Municipal Code, any fees for permits shall be established by resolution of the City Council.

## CONSTRUCTION MANAGEMENT

Section 12.26.090 of the Claremont Municipal Code (Appendix A) and Section 435 of the Land Use and Development Code prescribe protections for pre-existing trees that may be impacted by new development in the City.

Construction damage associated with development, maintenance, or construction taking place around existing trees can be detrimental to tree health. The following construction specifications shall be observed to preserve and protect existing trees located on a site planned for development.



**General Site Evaluation.** As part of the environmental review for a location planned for development, maintenance, or construction, the Community Development Department shall consult the Community Services Department on the appropriate measures to take regarding trees existing on the project site. Community Services, Community Development, and an ISA Certified Arborist are to identify which trees to remove and replace by developing an appropriate mitigation plan. Staff shall develop a plan to protect all trees that are to remain by establishing a Tree Protection Zone (TPZ) during construction activities. Department staff shall also examine site access and traffic route considerations, excavation limitations, appropriate locations for the piling of soil and debris, and the storage of equipment and vehicles as each of these activities pertain to trees on the project site.

**Tree Protection Zone (TPZ).** An area surrounding a tree and its critical root zone where no grading, excavation, construction activity, equipment storing, or vehicle parking is to occur. Temporary, protective fencing, made of a material that has high visibility, such as fluorescent-colored, with posts at regular intervals around the tree shall be installed to provide a protective barrier for the critical root zone of each tree. This fencing shall be placed at a minimum distance of fifteen (15') feet from the trunk of the tree or five (5') feet outside the drip line of the tree, whichever distance is greater. No activity shall take place within this fenced in area.

**Irrigation in the TPZ.** Irrigation should be provided within the TPZ if deemed necessary by an ISA Certified Arborist. If high value trees are within the TPZ, utilizing soil moisture sensors to determine if a tree needs water is ideal. Lacking sensors, drought-adapted species in Mediterranean climates may benefit from one (1") inch to two (2") inches monthly with variation to season and trees species.

**Construction Mulching.** If department staff determines that traffic encroachment within the drip line of a preserved tree is unavoidable, then a six (6") to twelve (12") inch layer of temporary mulch shall be placed over the affected area to disperse the weight of traffic and equipment for no longer than 30-days or as approved by an ISA Certified Arborist. As determined by an ISA Certified Arborist, a turf paver protection system may be required. Additional weight dispersal and mobility may require the placement of large plywood sheets over the mulched area. Construction mulching and plywood must be removed carefully, so as not to damage the tree, as soon as the required activity within the drip line of the tree has been completed. Remaining mulch shall be four (4") to six (6") inches away from the trunk, radially, and be two (2") to three (3") inches in thickness post construction activities.

**Excavation Requirements.** Whenever possible, services such as water lines and utilities shall be routed around the drip line of trees that are being preserved on a site. If department staff determines that excavation within the drip line of a preserved tree is unavoidable, then every effort shall be made to tunnel under or through the tree's root system with a minimal amount of root pruning, rather than to trench across the tree's roots. An alternative method would be the use of an air spade to help reduce the amount of root damage.



All root pruning shall be in accordance with the Maintenance Guidelines established for such activity in this Manual.

**Grade Changes.** A change of grade around a tree, even well outside of a tree's root zone, can have serious impact on the tree due to soil compaction resulting in reduced aeration or poor drainage.

Department staff shall recommend that development specifications include requirements for mitigating such impacts to trees that are to be preserved on a project site based upon the type of grade changes that are to be implemented, tree species, drainage patterns, soil conditions and future irrigation and maintenance plans.

Department staff shall employ the following mitigation measures whenever feasible:

**Raised Grades.** If a grade around an existing tree is to be raised with a backfill less than six (6") inches in depth, then department staff should consider vertical mulching as a mitigation measure. If a grade around an existing tree is to be raised more than six (6") inches, then department staff should consider specifying the construction of a tree well as a mitigation measure.

**Lowered Grades.** If a grade around an existing tree is to be lowered along the side of its root zone, then department staff should consider specifying the construction of a terraced dry wall as a mitigation measure. If a grade around an existing tree is to be lowered along all sides of its root zone, then department staff should consider specifying the construction of a tree island as a mitigation measure.

## GLOSSARY

For the purpose of this manual and the interpretation of regulations, the following definitions shall apply:

**ANSI A300:** The Section of American National Standards which defines tree maintenance standards for pruning, trimming, and removing trees and palms.

**ANSI Z60.1:** The American Standard for Nursery Stock. Standardized system providing buyers and sellers of nursery stock with a common terminology, to facilitate commercial transactions involving nursery stock.

**Branch Bark Ridge:** A raised ridge of bark in a branch that marks where branch and trunk tissues meet and often extend down the trunk.

**Callus:** Undifferentiated tissue initially formed by the cambium around and over a wound.

**Compartmentalization of Decay in Trees (CODIT):** The natural process by which trees contain and isolate damaged areas by creating chemical and physical boundaries to limit the spread of disease and prevent further decay.

**Co-dominant Branch/ Stem:** Forked branches or stems arising from a common junction, having nearly the same size diameter.

**Crotch:** The angle formed at the attachment between a branch and another branch, leader or trunk of a woody plant.

**Crown:** The leaves and branches of a tree or shrub; the upper portion of a tree measured from the lowest branches on the trunk to the top including all foliage.

**DSH:** The Diameter at Standard Height as measured at 54 inches above the ground is the standard measurement of tree size used by ISA Certified Arborists.

**Dead Tree:** A tree that is dead, damaged beyond repair, or is in an advanced state of decline as determined by an ISA Certified Arborist.

**Diseased Tree:** A tree that has deviation in normal functioning and/ or is inundated with a persistent disease that is known to cause tree mortality as determined by an ISA Certified Arborist.

**Drip Line Area:** The suggested minimum area for watering within X distance from the trunk of a tree in a typical location, measured from the perimeter of the trunk of the tree at 54 inches above natural grade, where X equals a distance ten times the diameter of the trunk at 54 inches above natural grade, or the distance to the outermost edge of the tree canopy, whichever is the lesser distance.



**Hazardous Tree:** A tree that is an imminent threat to the safety of persons or property. If a tree possesses a structural defect that may cause the tree or part of the tree to fall on someone or something of value, and the condition is determined to be imminent, the tree is considered hazardous.

**Injury:** A wound resulting from any activity, including but not limited to excessive pruning, cutting, trenching, excavating, altering the grade, paving or compaction. Injury shall include bruising, scarring, tearing or breaking of roots, bark, trunk, branches or foliage, herbicide or poisoning, or any other action leading to the death or permanent damage to tree health.

**International Society of Arboriculture (ISA):** is a professional association of arborists and tree workers recognized internationally as one of the leading agencies in the research and establishment of high standards for all aspects of tree care.

**ISA-Certified Arborist:** A person who has demonstrated knowledge and competence by passing a comprehensive exam on tree care to obtain the International Society of Arboriculture (ISA) “Certified Arborist” certification.

**Lateral:** A secondary or subordinate branch or twig growing from a tree trunk or a larger limb.

**Leader:** A primary, dominant upright stem, usually the main trunk of a tree that dominates a portion of the crown.

**Lion-tailing:** Lion-tailing is the over-pruning of a tree by removing an excessive number of inner and lower branches. The resulting tree limbs will appear “long and slender” with a “puff” of terminal foliage at the end like a lion’s tail. Lion-tailing increases the risk of branch failure by weakening the tree’s root system and eliminating the dampening effect which interior limbs provide when branches flex and bend during storms and high wind events.

**Pollarding:** A destructive pruning technique in which the upper branches of a tree are removed using internodal cuts to create a dense head of branches and foliage, typically involving annual pruning. This is common in European urban areas to maintain trees at a predetermined height, rather than allowing them to assume their normal and natural size and shape.

**Root Ball:** The mass of roots growing from the trunk of a tree, including the surrounding soil.

**Root Flare:** The junction between the root of a plant and its stem, often indicated by a trunk flare.

**Tree Care Industry Association (TCIA):** Professional trade association whose purpose is to raise the standards of the tree care industry and provide useful services to the public.



**Topping:** Topping is perhaps the most harmful tree pruning practice. Topping is the indiscriminate and inappropriate cutting of tree branches to a predetermined crown limit, cutting to stubs or lateral branches that are not large enough to assume the terminal role. Topping is detrimental to the tree's overall health, stability, appearance and necessitates annual maintenance. Other names for topping include "heading", "heading back", "stubbing", "tipping", "hat-racking", and "rounding over".

**Tree health:** Refers to the overall condition of a tree, determined by biotic and abiotic factors impacting the tree's growth and productivity.

**Tree health inspection:** The routine and systematic assessment of a tree with respect to five distinct tree components: roots, trunk scaffold branches, small branches, and foliage. The assessment considers health factors such as insect or pathogen damage, mechanical damage, presence of decay, presences of wilted or dead leaves, and wound closure.

**Tree Risk Assessment Qualification (TRAQ):** The International Society of Arboriculture's qualification to demonstrate competency in determining risk of trees at the time of inspection through a systematic and methodological process. This qualification identifies tree risk in relation to safety of people and property and considers all risk mitigation methods prior to recommending a tree for removal.

**Utility Arborist Association (UAA):** Professional trade association whose purpose is to raise the standards of utility line clearance, while providing the safest conditions possible for line-clearance workers.

**Wound:** Any opening that is created when the tree's protective bark is penetrated, cut, or removed, injuring or destroying living tissue, exposing the tree to pathogens. Pruning a live branch creates a wound, even when the cut is properly made.

**Wound Wood:** Differentiated woody tissue, also referred to as a callus roll, which forms after callus tissue has formed around the margins of a wound. Wounds are closed primarily by wound wood.



## **APPENDICES**

Appendix A - Chapter 12.26 of the Claremont Municipal Code

Appendix B - Heritage Tree and Historic Grove List

Appendix C - Designated Street Tree List

Appendix D - Conflict Prevention Methods Before Planting

Appendix E – Mitigation Methods for Tree and Infrastructure Conflict

## Appendix A

### Chapter 12.26 of the Claremont Municipal Code

The Claremont Municipal Code Chapter 12.26 provided below is from May 2020. The most current version can be found on the City website at [www.ci.claremont.ca.us/government/municipal-code](http://www.ci.claremont.ca.us/government/municipal-code)

## Chapter 12.26

### CITY TREES

#### Sections:

- 12.26.010 Definitions.
- 12.26.020 Duties of Community and Human Services Commission.
- 12.26.030 Duties of Director of Community Services.
- 12.26.040 Duties of private property owners.
- 12.26.050 Street trees.
- 12.26.060 Tree planting in subdivisions.
- 12.26.070 Permits.
- 12.26.080 Fees.
- 12.26.090 Protection of City trees.
- 12.26.100 Interference with Director of Community Services.
- 12.26.110 Violation-Penalty.

#### **12.26.010 Definitions.**

The following definitions shall apply to this chapter.

- A. "Compaction" is the compression of the soil structure or texture by any means that creates an upper layer that is impermeable.
- B. "Designated Street Tree List" means a list of specific tree species which have been designated by the Community and Human Services Commission for each City street, or part of it, as the species of tree to be planted and maintained within the City easement of that street.
- C. "Director" means the Director of the Community Services Department or his/her designee.
- D. "Drip Line Area" means the suggested minimum area within X distance from the trunk of a tree in a typical location, measured from the perimeter of the trunk of the tree at 54 inches above natural grade, where X equals a distance ten times the diameter of the trunk at 54 inches above natural grade, or the distance to the outermost edge of the tree canopy, whichever is the lesser distance.
- E. "Easement," "Parkway" or "Right-of-Way" means land owned by another over which the City has an easement or right-of-way for street and related purposes. "Parkway" refers to that portion of a street right-of-way, which is available for landscaping, and not for curb, gutter or pavement.
- F. "Heritage Trees" are any trees within the City's easement or on City-owned property which have been found to be of significance to the community or of notable historic interest and are so designated by action of the Community and Human Services Commission.
- G. "Maintain" or "Maintenance" means and includes root pruning, trimming, spraying, watering, fertilizing, mulching, treating for disease or injury, or any other similar act, which promotes growth, health, beauty and life of any tree.
- H. "Pruning," "Trimming" or "Thinning" means to reduce the size of a tree using professionally accepted standards, as established by the International Society of

Arboriculture (ISA), Tree Care Industry Association (TCIA) or American National Standards Institute (ANSI) Section A300, to control the height and spread of a tree, lessen the wind resistance, preserve its health and natural appearance, produce fuller branching and shaping, aid in disease prevention by allowing more light and air passage within the branches, or make adjustments which will increase its longevity in an urban environment.

I. "Public Tree" or "City Tree" means any tree which is located within any public park, City easement, or on any other City-owned property.

J. "Topping," "Heading Back," "Stubbing" or "Pollarding" means a severe type of pruning which usually produces less desirable results than more moderate pruning with respect to the tree's natural form and which is generally hazardous to the overall health and stability of the tree.

K. "Tree Policy Manual" means a document prepared by the Community Services Division which states policies (approved by the City Council), procedures and other relevant information regarding the selection, planting, maintenance and removal of all City trees.

L. "Urban Forest" or "Urban Forestry" means the ecology of native and nonindigenous plantings creating a forest in the human living environment, and emphasizing the practice of wise, professional, planned management of all tree resources within an urban area for multiple use and benefit of the entire community. (07-04)

#### **12.26.020 Duties of Community and Human Services Commission.**

The Community and Human Services Commission serves as the City's tree advisory board. The commission shall:

A. Study the problems and determine the needs of the City in connection with its tree planting and maintenance programs; establish and revise the designated street tree list; and hold discussions of tree-related issues at public meetings.

B. Hear and determine appeals from staff decisions regarding street tree removal. The commission may grant an appeal if it finds that the staff decision would result in a burden on the property owner that substantially outweighs the benefit to the public. The commission's decision may be appealed to the City Council if a written appeal, setting forth the grounds, is filed with the City Clerk within ten days of the commission decision. If no timely appeal is filed, the decision shall be final. (07-04)

#### **12.26.030 Duties of Director of Community Services.**

The powers and duties of the Director of Community Services, or his or her designee, under this chapter are as follows:

A. To designate a particular place within the City easement or on any City-owned property where a City tree will be planted.

B. To recommend to the Community and Human Services Commission any changes or additions to the designated street tree list.

C. To draft a tree policy manual that states policies and procedures concerning the selection, planting, maintenance and removal of trees in public places to promote a viable urban forest.

D. To grant or deny the issuance of permits in accordance with the terms of this chapter.  
(07-04)

**12.26.040 Duties of private property owners.**

The duties of any owner of private property whose property has a City easement on its for street purposes are as follows:

- A. To accept, protect and provide adequate water to any City tree planted in the public easement over his or her property, and not to interfere with the City's provision of water to such trees, whether by water truck or other means;
- B. To notify the Community Services Division of any suspected tree hazards or maintenance needs of any City tree on his or her property. (07-04)
- C. To remove any vines from City street trees planted in the easement over his or her property; (09-06)
- D. To remove all fallen leaves and other deadfall from any City tree planted in the public easement over his or her property, and to properly dispose of the deadfall in an appropriate waste receptacle. (09-06)

**12.26.050 Street trees.**

No tree shall be planted within a parkway other than the species designated as the street tree for that particular street, or portion of a street, by the Community and Human Services Commission. No street tree shall be planted, except by the City, until a tree permit has been issued for it as provided in Chapter 12.26.070 of this chapter. (07-04)

**12.26.060 Tree planting in subdivisions.**

Any subdivider of land shall install City trees in accordance with the requirements of Title 16 of this code and any related resolutions. (07-04)

**12.26.070 Permits.**

- A. No person shall plant or otherwise disturb any City tree without first obtaining a permit from the Director of Community Services.
- B. Applications for permits must be made to the Community Services Division on forms provided by the division, and shall include such information as the director deems necessary to review the application.
- C. Work undertaken by the permittee or his or her agents may be stopped immediately and the permittee's permit may be revoked by oral or written order of the director when the director determines that the program of work or conditions outlined in the permit are not being complied with.
- D. The director's decision may be appealed to the Community and Human Services Commission if a written appeal, setting forth the grounds, is filed with the Community Services Division within ten days of the director's decision. If no timely appeal is filed, the decision shall be final. (07-04)

### **12.26.080 Fees.**

Fees for permits and appeals shall be established by resolution of the city council. Any previously adopted resolution establishing fees in relation to prohibited activities shall be repealed. (07-04)

### **12.26.090 Protection of City trees.**

A. It is unlawful for any person to injure, cut, damage, carve, transplant, prune, root prune or remove any public tree. (07-04)

B. It is unlawful for any person to attach, cause to be attached or keep attached to any public tree, or to the guard or stake of a public tree, any rope, wire nails, tacks, staples, advertising posters, decorations, ornaments, flags, toys, swings, lights or any other contrivance whatsoever without first obtaining a permit or explicit approval from the City. (09-06)

C. It is unlawful for any person to cause or allow any poison or other substance harmful to tree life to lie, leak, pour, flow or drip upon or into the soil within the drip line of any public tree; or set fire or permit any fire to burn when such fire or heat thereof will injure any portion of any public tree; or to operate any equipment, such as mechanical weeding devices, in such a manner as to cause damage to a public tree in any way. (07-04)

D. No person shall injure any public tree located within an easement or public right-of-way on his or her private property by neglecting to provide the necessary amount of water, as determined by the Tree Policy Manual and the terms of this chapter, required for said tree's continued good health and viability. (07-04)

E. No person shall impact the drip line area of a City tree in a way that may reasonably be expected to damage the root system, compact the soil over the roots, or impede free passage of water, air or fertilizer to the roots of any public tree. (07-04)

F. Special consideration shall be afforded public trees determined by the Community and Human Services Commission to be heritage trees. Such trees shall be removed only when public interest served by removal outweighs the interest in preservation and heritage status. (07-04)

G. All trees of any species or variety of the genus *Ulmus* which are found to be infected with *Ceratocystis ulmi* (Dutch Elm disease) in the city are a threat and a hazard to all trees of the genus *Ulmus* in Claremont. This section requires that all aboveground portions of such infected trees be destroyed or properly disposed of as provided in this chapter. (07-04)

H. No person shall possess, store or transport into the City all or any part of the trees of the genus *Ulmus* infected with *Ceratocystis ulmi* (Dutch Elm disease); provided, however, that wood, branches and roots of such trees may be transported either to a safe place for burning or burial, under a minimum of two feet of earth, within five days following the discovery of such infection, or to such sites, and under such conditions, as are approved by the Community and Human Services Commission for the processing and subsequent elimination of the disease hazard. Infected trees may be treated in a manner approved by the county agriculture commissioner to affect a cure for the disease if and when an effective cure becomes known. (07-04)

I. During the construction, repair, alteration, moving or removal of any building, structure of any other type of construction in the City, no person in control of such work

shall leave any public tree, shrub or plant in the vicinity of such activity without sufficient guards or protectors as identified in the tree policy manual to prevent injury to the tree, shrub or plant in connection with such construction, repair, alteration, moving or removal. The costs of any such protection shall be borne by the person responsible for the improvement. (07-04)

**Interference with director of community services.**

No person shall hinder, prevent, delay or interfere with the director or any of his or her agents while engaged in carrying out the execution or enforcement of this chapter. Provided, however, that nothing in this section shall be construed as an attempt to inhibit the pursuit of any remedy, legal or equitable, in any court of competent jurisdiction for the protection of property rights by the owner of any property within the City. (07-04)

**12.26.110 Violation-Penalty.**

A. Any violation of this chapter shall be a misdemeanor or infraction at the discretion of the city attorney or district attorney.

B. Irrespective of and cumulative to any criminal conviction for a violation of this chapter, the City may, pursuant to Government Code Section 36901, impose a civil penalty in an amount not exceeding one thousand dollars on any person who commits a violation of this chapter. The City may recover the penalty either through an administrative hearing or a civil action brought either by the city attorney or a designated employee of the City.

C. Irrespective of whether the City pursues criminal and/or civil action under this chapter, nothing in this chapter shall prevent the City from seeking restitution for damage to City property as an alternative to criminal action and/or civil action to recover a civil penalty in accordance with subsection (B) of this section. (07-04)

## Appendix B

### Heritage Tree and Historic Grove List

#### Heritage Tree List

Address and Number	Botanical Name	Common Name
1105 N. College Avenue (F4)	<i>Sequoiadendron giganteum</i>	Giant sequoia
Mallows Park (F20)	<i>Leptospermum leavigatum</i>	Australian Tea Tree (removed 2016)
201 W. Eleventh Street (S-2)	<i>Pinus halepensis</i>	Aleppo pine
1101 N. Indian Hill Boulevard	<i>Cedrus deodara</i> (private tree)	Deodar cedar
Memorial Park (P-94)	<i>Cinnamomum camphora</i>	Camphor tree
1102 N. College Avenue (S-3)	<i>Eucalyptus robusta</i>	Swamp Mahogany

#### Historic Grove List

Location and Number	Botanical Name	Common Name
353 – 357 W. Eleventh Street (F1, F1, F1)	<i>Quercus agrifolia</i>	Coast live oaks
N. Indian Hill Boulevard (from Harrison Avenue to Foothill Boulevard)	<i>Ulmus americana</i>	American elms
N. College Avenue (from First Street to Sixth Street)	<i>Eucalyptus spp.</i>	Various species

The Heritage Tree List reflects the current inventory information of each tree. Heritage trees have not changed, rather their inventory identifiers have changed.






## **Appendix C**

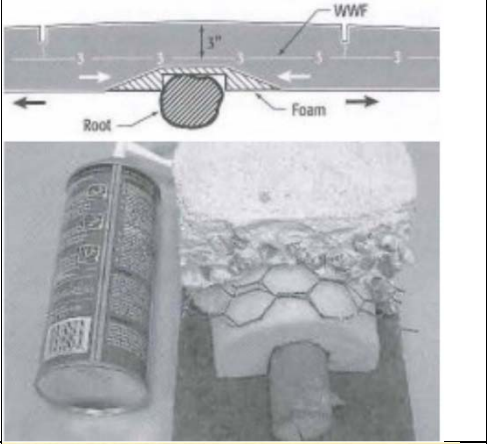
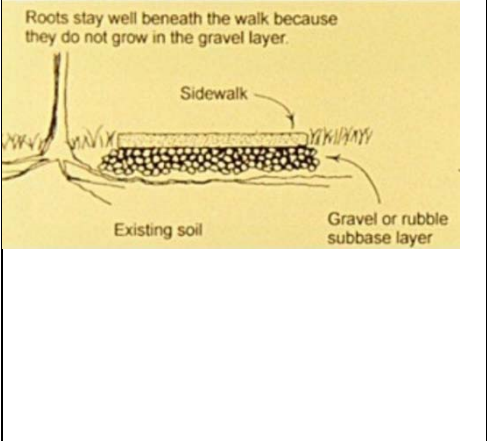
### **Designated Street Tree List**

A revision to the Designated Street Tree List is up for recommendation. Once approved it will be included here.

## Appendix D




### Conflict Prevention Methods Before Planting




Method	Description	Pros	Considerations	Example Image
Curb Extensions (bulb outs)	Extends the sidewalk a short distance, often at an intersection, providing additional pedestrian space and narrowing roadways.	Increases pedestrian safety through traffic calming and shortening crossing distances.	Impacts to drainage and existing utilities, site specific transportation conditions or impacts.	
Suspended Pavement Systems	Pavement supported by and lifted over a void space filled with soil for root growth.	Creates a viable tree site where previously not possible.	Involves removing and repaving sidewalks, considerations for site-specific grading requirements.	
Lowered Tree Sites	A cutout in the sidewalk in which a hole is dug several feet deep, typically with metal grates placed over the hole and around the trunk of the tree.	Prevents soil compaction with reduced pedestrian traffic, enables installation of a tree at a site with limited planting space.	Existence of underground infrastructure, increased maintenance due to accumulation of debris, must include a drainage plan to avoid oversaturation of soil.	



<p>Foam Underlay</p>	<p>A foam layer of support between pavement and existing soil or tree roots.</p>	<p>Help prevent root damage, offers an alternative to root pruning.</p>	<p>Best used to repair damage caused by mature tree roots, short-term solution, not recommended for tree species known to have rapid root growth.</p>	 <p>The top image is a cross-section diagram showing a tree root (shaded circle) positioned between a concrete sidewalk (labeled 'WWF') and the ground. A layer of foam is being applied between the root and the sidewalk. A vertical dimension line indicates a 3-inch depth for the foam. Arrows point to the 'Root' and 'Foam' layers. Below the diagram is a photograph showing a person using a spray can to apply foam into a trench cut into the pavement.</p>
<p>Modified Gravel Layer</p>	<p>A layer of gravel between pavement and existing soil or tree roots.</p>	<p>Suppressed root growth, more longevity than foam underlay, thickness of gravel around roots can be adjusted to accommodate tree size.</p>	<p>Potential to wound tree roots, increasing susceptibility to soilborne pathogens.</p>	 <p>The diagram shows a cross-section of a sidewalk (labeled 'Sidewalk') resting on a layer of gravel or rubble (labeled 'Gravel or rubble subbase layer'). Below the gravel is the 'Existing soil'. A tree root is shown growing from the soil into the gravel layer. A text box above the diagram states: 'Roots stay well beneath the walk because they do not grow in the gravel layer.'</p>



## Appendix E

### Mitigation Methods for Tree and Infrastructure Conflict

Method	Description	Pros	Considerations	Example Image
Pervious Concrete	A high-porosity concrete that allows air and water to reach soil and tree roots.	May reduce stormwater runoff, encourage deeper root growth, reduce root damage to sidewalks, provide better growing conditions.	Requires deeper excavation for installation, requires more maintenance than standard concrete.	
Porous Asphalt	Asphalt pavement which allows water to pass through to soil with a two (2) to four (4) inch thick open-graded asphalt layer.	May reduce stormwater runoff.	Cannot be produced in small quantities, use only when long sidewalk segments are being installed.	
Rubberized Pavers	Pavers made from recycled rubber designed to be more flexible than other sidewalk materials.	More flexible than concrete, provides room for continued root growth.	Requires cutting to fit to size, lift with excessive root growth.	

<p>Decomposed Granite (DG)</p>	<p>Sidewalk material consisting of natural granite pieces that are 3/8 inches or smaller that resembles a combination of gravel and sand.</p>	<p>May be used in place of mulch, provides flexible but walkable surface near tree roots.</p>	<p>Not recommended for busy pedestrian routes, increased level of maintenance due to uneven settling, may require additional binders and regular maintenance to remain ADA compliant.</p>	
<p>Reinforced or Thicker Slab</p>	<p>Concrete reinforced with steel rebar or wire mesh and/or poured thicker near edges.</p>	<p>Helps resist uplift of tree roots, may be used to correct uplift after other corrective actions have been taken.</p>	<p>May not be compatible with future utility installation, should not be used where additional root growth is anticipated.</p>	
<p>Expansion Joints</p>	<p>Separations between two sections of sidewalk at any interval.</p>	<p>Allow for some movement of concrete, used to control the location of sidewalk cracking.</p>	<p>Not recommended for areas where significant additional root growth is anticipated, short-term solution.</p>	

<p>Tree Pits/ Expanded Tree Pits</p>	<p>Cutout in the sidewalk in which a tree is planted.</p>	<p>Provides space for new plantings where previously not possible.</p>	<p>Must establish minimum sizing requirements to ensure adequate soil volume, difficult to implement in private easement areas.</p>	
<p>Bridging</p>	<p>A panel installed above overgrown tree roots connecting other sections of sidewalk surrounding overgrown roots, creating a slight rise in the sidewalk.</p>	<p>Provides grade separation between tree root zone and sidewalk, allows tree roots to grow in soil, potential materials include concrete or steel panels, may be used to preserve a high value tree.</p>	<p>Site-specific requirements determine if this resolution is feasible, a nonslip surface treatment is required for metal/ steel materials, additional ADA requirements apply.</p>	

<p>Curving or Offset Sidewalk</p>	<p>Modify sidewalk path to accommodate for tree preservation.</p>	<p>Gives trees more growth space, increases pedestrian safety by separating sidewalks from vehicular traffic.</p>	<p>Requires adequate space in the right-of-way, may require collaboration with private property owners, care must be taken to ensure ADA compliance.</p>	
<p>Root Barriers</p>	<p>A physical barrier installed to prevent roots from causing damage to nearby structures or infrastructure.</p>	<p>Deters root growth to limit hardscape damage.</p>	<p>Deters roots where root barrier exists, does not address all tree root issues, not an arboriculture BMP.</p>	
<p>Asphalt</p>	<p>Flexible pavement made of gravel or stone bound together with a waterproof substance.</p>	<p>Low initial cost, more flexible than concrete, easily repaired.</p>	<p>Not widely used due to dissatisfaction with appearance, useful life can vary greatly and can be shorter than concrete, preferred in rural areas.</p>	