

CITY OF LATHROP

Department of Public Works

Design & Construction Standards



2022

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SECTION 11 TREE PRUNING STANDARDS

11-1 GENERAL

These general requirements provide conditions for the basic standards for tree pruning in the City of Lathrop. These standards apply to all those working on all trees located on public property and in the public right-of-way, including City of Lathrop employees and managers, private contractors, property owners, and residents.

11-2 STANDARDS

Unless otherwise shown or specified all materials and methods shall conform to the appropriate current edition of:

- A.** American National Standards Institute (ANSI) A300 Pruning Standards
- B.** ANSI Z133.1 Safety Standards
- C.** ISA Best Management Practices: Tree Pruning

City arborists, managers, related personnel and contractors should obtain copies of the above publications and apply the standards and guidelines when engaged in pruning operations in Lathrop. Copies of these documents can be obtained from the International Society of Arboriculture (see Resources). Occupational health and safety standards in the workplace shall be observed at all times.

For street trees, Chapter 12.16 Trees, of the City of Lathrop Municipal Code establishes responsibility regarding planting, maintenance (including pruning), and removal.

11-3 QUALITY CONTROL

Trees must be maintained to an industry standard for shape and health. Trees shall be trimmed according to the International Society of Arboriculture standards. Trees shall be trimmed to maintain safe pedestrian traffic and vehicle traffic. These clearances are 7 feet above the sidewalk and 12 feet above the roadway. Refer to City Standard Detail R-66 for vehicle sight distance requirements.

11-4 PRUNING PLANS

For commercial contractors, a written plan of work shall be prepared that clearly identifies the tree species, location, need for pruning and the scope of pruning. A checklist format can be used. Where multiple reasons for pruning exist, they should be prioritized from highest to lowest. A separate plan is needed for each tree. For groups of trees of the same species with similar pruning needs, one plan will suffice.

For all city departments and agencies, work plans shall be developed either for individual trees or for groups of trees, such as trees along streets, in parks, or on the grounds of public buildings. Plans shall include species, location, need for pruning and the scope of pruning. Pruning plans shall be specific for the species to be pruned.

Work plans shall be available at work sites during pruning operations.

A. Pruning Cuts

Pruning is a wounding process that causes some level of injury to trees. It is important to make pruning cuts that minimize injury or the potential for injury. For instance, cuts should be made on branches in a manner that ensures rapid and complete wound closure, thus reducing the potential for decay. Information on appropriate branch removal practices and the size and location of cuts is found in ANSI A300 Part 1 (Pruning) and Best Management Practices: Tree Pruning (see References).

Note that flush cuts increase the potential for decay and reduce the formation of callus tissue above and below the wound (wound wood). In some cases, flush cuts can stimulate vigorous but incomplete callus development. Conversely, leaving branch stubs prevents wound closure and increases the potential for decay. These types of pruning cuts should be avoided.

11-5 PRUNING PRACTICES

- A. Pruning Cuts: All pruning cuts shall conform to ANSI A300 standards (Part 1: Pruning). Do not make flush cuts or leave branch stubs.
- B. Amount of Pruning: Not more than 25% of the crown shall be removed within an annual growing season. The percentage of foliage removed shall be adjusted according to age, health, and species considerations. Stressed trees are less tolerant of pruning and leaf area removal should be minimal. In cases where more than 25% of the crown needs to be removed, such as to reduce the potential for structural failure, a qualified arborist shall make an assessment of the amount of pruning needed to abate the hazard. When

possible, such pruning should be scheduled over a two- or three-year period. Pruning should be minimal on species prone to water sprout development. For such species, pruning during the summer months may reduce the potential for water sprout development (see Standard 4). For species susceptible to sunburn injury, pruning shall not expose bark tissue of the trunk and scaffold branches to sunlight levels that lead to injury.

- C. Pruning Schedule: Generally, pruning can be done throughout the year. For some trees, however, certain periods or seasons need to be avoided. For species susceptible to particular insect or disease problems, avoid pruning at times of the year when the problem will be exacerbated (e.g., do not prune pines during the spring and summer months in order to minimize the potential for bark beetle infestations). For trees with a notable flowering trait, avoid pruning prior to or during flowering periods (unless flowers cause allergic reactions). Pruning to remove dead, diseased, or broken branches can be done at any time of year. Pruning during the summer months can be used as a strategy to reduce water sprout development in certain species.

For deciduous species, do not prune during bud swell, bud break, or leaf expansion in the spring. Do not prune during times of the year that may initiate or exacerbate a pest problem (e.g., do not prune elms during the summer months to avoid Dutch elm disease infection and transmission).

Broadleaf-evergreen species (such as Eucalyptus spp., Acacia spp., and Myoporum spp.) can be pruned throughout the year. Avoid pruning during periods that stimulate substantial water sprout development. For species prone to foliar diseases, avoid pruning at times when disease-susceptible new growth can be stimulated by pruning.

For conifers, pruning during the winter months (November through February) is generally recommended. Do not prune during periods of needle formation and enlargement. For species susceptible to bark beetle infestations (e.g., Pinus spp.), do not prune when beetles are active (typically March through October in Lathrop).

- D. Wound Treatment: Pruning wound treatments (dressings and paints) shall not be used.
- E. Equipment: Pruning equipment shall be sharp and sized appropriately for the pruning cut. Avoid the use of any pruning and climbing equipment that may cause damage to bark tissue. Spikes (climbing spurs) shall not be used for climbing trees unless the tree is being removed, or when limbs are more than throw-line distance apart and there is no other means of climbing the tree. Pruning tools shall be treated with a disinfectant (such as Lysol) when pruning trees infected with a pathogen that may be transmitted (on tools)

from one tree to another of the same species, such as elms (*Ulmus* spp.). Disinfectants should be used before and after pruning individual trees.

11-5.2 Pruning Mature Trees

- A. Pruning Types: In Lathrop, all those engaged in tree pruning operations shall be familiar with each of the pruning types. Selection of the pruning type(s) shall be based on pruning objectives (see Standard 1). Refer to publications cited in Section C1 for descriptions of pruning types. Clearance pruning that does not comply with Standards 3 and 4 shall be conducted only under the supervision of a qualified arborist (see footnote 1).
- B. Head Cuts: Heading cuts shall not be used when pruning mature trees, except in very limited cases. Whenever possible, use reduction cuts to reduce height and branch removal cuts (thinning cuts) to reduce branch end weights. When reduction and branch removal cuts are not possible (such as when interior lateral branches are not present) and tree hazard potential is high, then heading cuts may be needed, but their use should be minimized. The practice of pollarding shall be limited in application to London plane tree (*Platanus x acerifolia*) and elm (*Ulmus* spp.), and only when initiated on young trees (i.e., not after they reach a juvenile or mature stage).
- C. Stressed Trees: For old, unhealthy, and stressed trees, pruning should be limited to the removal of dead branches and structural defects. Removal of live branches should be avoided or minimized.
- D. Utility Pruning: Utility pruning requires extensive training in safe work practices and specialized pruning techniques. Prior to pruning trees for line clearance, all workers shall have documented training that meets utility and tree industry standards. Pruning practices shall follow guidelines described in ANSI A300 Pruning Standards (see References). A plan of work that incorporates these practices shall be developed prior to pruning.

11-5.3 Pruning Young and Juvenile Trees

Trees should be structurally pruned when they are young. Follow guidelines in: Training Young Trees for Structure and Form (see References).

Young trees will need follow-up pruning, preferably three times in the first five years, and then periodically as they develop through the juvenile phase into maturity.

11-5.4 Palm Pruning

Palm pruning should be limited to the removal of dead, broken, and strongly chlorotic fronds. Live, healthy fronds should not be removed. Fronds should be severed close to the petiole base without damaging living trunk tissue. Palm fruit, flowers, and loose petiole bases should be removed if deemed to be a safety risk. A disinfectant (such as Clorox or rubbing alcohol) shall be used on pruning tools before and after pruning individual trees. Climbing spikes or spurs shall not be used to climb palms for pruning.

11-5.5 Root Pruning

Root pruning should be considered only when other options for correcting a conflict between roots and infrastructure are deemed not practical. For trees requiring root pruning, a tree assessment shall be conducted and a root-pruning plan shall be developed by a qualified arborist (see footnote 1). Avoid root pruning during times of the year when wind loads on trees are greatest, such as during the winter months. Crown pruning prior to or following root pruning shall be done only in cases where the potential for structural failure may increase substantially because of root pruning.

END OF SECTION