Cal Poly Humboldt.

CAMPUS TREE CARE PLAN
Revised Fall 2024

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1. **Background information**

California State Polytechnic University, Humboldt (Cal Poly Humboldt or Humboldt) is the northernmost campus in the California State University system (CSU). Overlooking Arcata, CA and Humboldt Bay, the 144 acre main campus is situated on the edge of a Coast Redwood forest. Students live and learn in one of the world's most beautiful natural environments. The University offers dozens of majors and minors, including programs in natural resources that are considered among the best in the nation. Hands-on learning is an important part of a Cal Poly Humboldt education, with students participating in lab research, fieldwork, volunteer work, and internships. Humboldt's curriculum demonstrates a long-standing commitment to social and environmental responsibility and to the local community, providing students an extraordinary college experience. [Cal Poly Website, Our History]

LAND ACKNOWLEDGMENT

We acknowledge that Cal Poly Humboldt is located on the unceded lands of the Wiyot people, where they have resided from time immemorial. We encourage all to gain a deeper understanding of their history and thriving culture. As an expression of our gratitude, we are genuinely committed to developing trusting, reciprocal, and long-lasting partnerships with the Wiyot people as well as all of our neighboring tribes. [Cal Poly Website- Land Acknowledgement]

Cal Poly Humboldt's purpose is to provide the highest quality and affordable college education built on the contributions of diverse students, staff, and faculty who are committed to a just and sustainable world.

Cal Poly Humboldt's vision is epitomized by the following statements:

We will be the premier center for the interdisciplinary study of the environment, climate crisis and resilience to climate change, and the conservation of ecological systems and natural resources. Our focus will continue to be on sustainability through environmental, economic, and socially responsible action.

We will be a center for the interdisciplinary study of just global societies. We will approach our work with an equity mindset and continue to emphasize inclusion across multiple dimensions of our university, modeling what we want to see in the world.

We will serve as a regional center for the arts inclusive of diverse arts traditions and contributions, and will fully engage with community arts partners and employers on behalf of our students.

As a designated Hispanic-Serving Institution (HSI) and as a Minority-Serving Institution (MSI), we will be an institution in which Black, Indigenous, and Persons of Color (BIPOC) students thrive.

We will partner with Indigenous communities to address the legacy of colonialism, and create space nurturing of traditional ecological knowledge (TEK), pedagogies, and curricula responsive to their identified needs.

We will be exemplary partners across our region and state by integrating community engagement and contributing to workforce development in our academic enterprise and beyond. [Cal Poly Humboldt Website, Purpose & Vision]

2. Purpose of this Document

Cal Poly Humboldt's Tree Care Plan (TCP) is designed to provide clear goals, direction, and standards of care with regard to the ornamental trees within campus grounds, the University's botanical specimens collection, as well as the interface between the bordering forest and campus academic and residential building, where an established forest of Coast Redwoods, Douglas Fir, Sitka Spruce, and Red Alder are prevalent. This document will strive to inform decision makers, grounds staff, tree care providers, and the campus community of the University's commitment to tree stewardship, sustainability, and campus safety.

3. Responsible Department

Grounds maintenance and general tree care is facilitated by Cal Poly Humboldt's Grounds Maintenance Department (FM Grounds), which is located within the division of Administration & Finance under the direction of the Vice President of Administration & Finance, the Assistant Vice President for Facilities Management (FM), and Director of Facilities Operations.

Tree care that is outside the standard scope of work or resources of FM Grounds will be facilitated by an approved and insured tree service company, as authorized by the Director of Facilities Operations. Oversight of that work will be delegated by the Director of Facilities Operations to ensure that it complies with the standard operating procedures referenced in the Cal Poly Humboldt Tree Care Plan.

In addition, the first formalized shared maintenance and co management agreement for outside space allocated to a specific department and/or program was created in 2022. The Food Sovereignty Lab & Traditional Ecological Knowledges Institute agreement for space surrounding the Behavioral & Social Sciences Building on the main Cal Poly Humboldt campus may be found here: https://facilitymgmt.humboldt.edu/sites/default/files/comanagement_agreement-_fsl_teki_fm.pdf

FM may consider similar co management agreements with other campus entities who utilize outdoor space on campus, such as the College of Natural Resources and Sciences, which has a vested interest in our campus tree collection.

4. Landscape and Tree Advisory Committee

The Landscape and Tree Advisory Committee (LTAC), https://facilitymgmt.humboldt.edu/landscape-and-tree-advisory-committee , is a working group of the University Space and Facilities Advisory Committee (USFAC). LTAC is charged to provide input to Facilities Management (FM) with regard to the planning, design and maintenance functions associated with the University's and Residence Hall landscape and urban forest. This charge is accomplished through review and input of a Campus Standard Plant List, provision of input for proposed landscape changes and design proposals, projects or plans, provision of input regarding policies associated with maintenance of the landscape owned or leased by the University, and increasing awareness of academic needs regarding the campus landscape which is considered to be an "outdoor classroom".

Landscape and Tree Advisory Committee Membership :
Position
Chair
Director, Facilities Operations
Ex-Officio
AVP Facilities Management
Director, Planning, Design & Construction
Representative as Appointed by the Director Housing & Residence Life
Appointed
Faculty Representative as Appointed by the Dean, College of Natural Resources & Sciences
Faculty Representative as Appointed by the Dean, College of Professional Studies
Faculty Representative as Appointed by the Dean, College of Arts, Humanities & Social Sciences
At-Large Faculty Representative as appointed by the Provost
Student Representative as Appointed by the Associated Students President
Community Member as Appointed by LTAC

This Committee is advisory in nature to Facilities Management and the University Space & Facilities Advisory Committee. Work done at this level will be utilized to develop recommendations (associated with those areas noted above) for action.

Term & Appointment:

- Two-year, with a renewal option.

Meeting Schedule:

- Once per semester at a minimum with additional meetings as determined by the Chair. In periods of rapid University development such as the Cal Poly Transformation https://www.humboldt.edu/about/polytechnic , meetings and communications will be more frequent.

5. Campus Tree Care Standard Operating Procedures

Campus tree care Standard Operating Procedures (SOPs) are largely based on principles of tree care outlined by the International Society of Arboriculture (ISA), as well as widely adopted protocols laid out by the American National Standards Institute (ANSI), specifically ANSI A300 pruning and planting standards.

Tree Work Requests

General tree work requests can be submitted by campus entities and other community members to FM through the department's website https://facilitymgmt.humboldt.edu/ . FM Grounds will assess the work requested, and perform the maintenance in accordance with the SOPs laid out in this plan. If the request is beyond prescribed routine maintenance, LTAC will be asked to review the request before FM Grounds or a qualified contractor completes the work.

Tree Removal

Suggested tree removals will be examined carefully. Considerations will be given for instances of tree death, declining tree health caused by diseases, invasive status, to preserve and best maintain existing campus buildings and infrastructure, to mitigate safety concerns including State Fire Marshal's recommendations, and to facilitate new buildings or infrastructure. All suggested removals of mature trees will be presented to FM Grounds and LTAC for review.

Emergency Response

FM and Cal Poly Humboldt will work quickly to mitigate danger associated with tree failure, fallen limbs, or other potentially hazardous situations involving campus trees. All emergency situations should be reported to the manager upon discovery of the hazard. If the required response is beyond the capability of FM Grounds, a contracted tree maintenance company will perform the service as soon as it can be arranged. (See **Appendix A**)

Tree Selection and Planting

New tree plantings will be selected from the Campus Standard Plant List (For more information see **Appendix B**), with considerations for site location, climate adaptability,

native status, species diversity, and aesthetics. Physical criteria important when choosing tree specimens include:

- General health
- General structural condition
- Root collar/trunk flare condition and location
- Anticipated mature size and shape
- Size of rootball/quality of root system
- Foliage color or density
- Any other related issue that will impact the estimated rate of success.

Trees that do not meet the condition, quality, or other criteria should be rejected for planting. Invasive trees or those which have reached maximum desired density are noted on the Campus Standard Plant List and will not be considered.

Tree site locations will be chosen carefully by FM Grounds as to accommodate mature size and form, and to best preserve campus infrastructure. Soil conditions, drainage, and irrigation needs must be considered to promote healthy trees. No trees should be planted without the express approval of FM. Tree plantings suggested as part of a major project will be evaluated by FM Grounds, and LTAC. Tree Planting SOPs were developed in part from ANSI A300 Part 6, and are referenced in **Appendix C**.

Pruning

FM Grounds is primarily responsible for tree pruning activities on campus. Contracted tree care work will be arranged when the scope or complexity of work are beyond FM Grounds resources. All tree care workers should visually inspect each tree before beginning work. Pruning objectives shall be established prior to beginning any pruning operation. To obtain the defined objective, the growth cycles and structure of individual species and the type of pruning to be performed should be considered.

The reasons for tree pruning may include, but are not limited to:

- Reducing risk and safety concerns
- Maintaining or improving tree health and structure
- Improving aesthetics
- Satisfying a specific need

General tree pruning SOPs were developed in part from ANSI A300 Part 1, and are referenced in **Appendix D.**

Other Tree Related Practices

Mulching

Woody mulch, processed on campus or locally, is often spread around trees seasonally or as needed to protect root systems, limit weed growth, and achieve a desired aesthetic. It is applied to a depth no greater than 3 inches, with care taken to prevent build-up around the root collar. Periodically, mulched areas are extended under drip lines of larger trees, tree stands, and high-value trees as they grow.

Pest Management

The Campus Integrated Pest Management (IPM) Plan will be utilized to identify and resolve pest issues associated with campus trees. In accordance with IPM Principles, chemical intervention will be used only if warranted, and if other interventions, including cultural, physical/mechanical, and biological, have proven ineffective.

Fertilization

Young trees may receive appropriate fertilizers to help establish them or to supplement for deficiencies. Older and established trees are not routinely fertilized, but may receive fertilizer indirectly from seasonal lawn feedings or from campus compost/ mulching. Specimen or high-value trees may receive prescribed fertilization as part of a specialized treatment plan.

6. **Protection and Preservation**

Protecting and preserving trees is critical to Cal Poly Humboldt's campus. Planned campus events and construction activities should not impact tree health, safety or aesthetics. FM Grounds does not allow strapping, hanging, or anchoring items such as hammocks or slack lines, nor postings or signage attached to trees.

During major construction, trees in proximity to a work site will be inventoried and assessed by FM Grounds and their conditions noted. Other campus partners may assess the educational value of specific trees to academic programs. If a tree is to remain on site during construction, an appropriate Tree Protection Zone (TPZ) will be applied to protect the tree and preserve the quality of the location. A TPZ is defined as an area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees [ISA Arborist Certification Handbook]. An area of 1 foot diameter for every inch of trunk for young trees, and greater for mature or sensitive specimens should be temporarily fenced with high-visibility barrier fencing and stakes. If the TPZ is a group or grove of trees, the area is defined by the combined, or overlapping diameters of trees on the perimeter of the group.

Campus SOPs for protection and preservations during campus construction activities were developed in part from ANSI A300 Part 5, and are presented in **Appendix E.**

7. <u>Tree Damage Assessment - Enforcement, Penalties, and Appeals</u>

Trees that have been damaged will be evaluated by FM Grounds by way of a Limited Visual Assessment to determine the extent of damage, and to formulate a plan regarding the care of the tree. If risk to safety or campus property is involved, a more-formal Basic Assessment may be conducted by a qualified Tree Risk Assessor under approval of the Director of Facilities Operations. Limited Visual Assessments and Basic Assessments are outlined by the International Society of Arboriculture Tree Risk Assessment Qualification (TRAQ).

With regards to penalties, the following scenarios will be considered when instances of tree damage occur:

- If a tree is damaged during construction, the cost damage assessment and mitigation may be the responsibility of the contractor that caused the damage, depending on the general provisions in the contract between the University and the vendor. If a tree is terminally damaged the cost of a replacement may also be levied. Changes in species and planting site locations may be considered for tree replacement, to ensure that species diversity and campus infrastructure is maintained to current standards and regulations.
- If tree damage is caused by another campus entity, chargebacks may occur to cover the cost of the evaluation and subsequent tree care interventions.
- If damage is caused by an individual or individuals, documentation will be made by the University Police Department (UPD) and appropriate action will be determined by the relevant oversight authority (e.g. UPD, Housing & Residence Life, or Dean of Students) depending on location and circumstance.
- Penalties for damages to campus trees may be appealed through the normal channels depending on the enforcing body (UPD, Housing & Residence Life, Dean of Students)
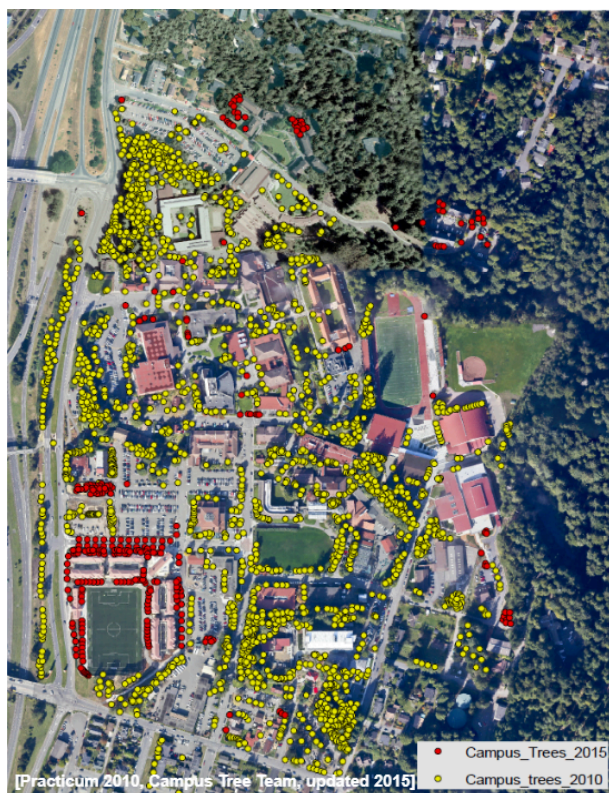
8. Goals and Targets

Cal Poly Humboldt intends to continue to uphold the health and quality of our campus trees, as well as to promote sustainability concepts, campus improvements, and safety. The following are goals and targets that we hope to achieve through implementation of the TCP and through cooperation with the larger campus community.

Goal 1- Update the campus tree inventory.

Cal Poly Humboldt's campus contains many trees and many tree species. Some are remnants of a larger forest, some have been planted intentionally for ornamental or educational value, and some have occurred naturally in many of the campus's slopes, green belts and forested margins. Keeping an accurate account of the trees on campus would be a benefit in a number of ways such as:

- Taking stock of tree diversity
- Monitoring for invasive species
- To facilitate planning future developments
- To carefully observe safety and infrastructure concerns
- To allow better integration with work management systems

[Practicum 2010, Campus Tree Team, updated 2015]
Campus_Trees_2015
Campus_trees_2010

A student-run project in 2010 identified and located over 2,000 trees on campus (the actual number on campus is far greater), representing 69 genera, and approximately 206 species, using GPS field equipment and identification guides. The group then separated the most numerous species to present in the report. They found that our iconic native tree, the Coast Redwood (Sequoia sempervirens), was the most frequently sampled. [Practicum 2010, Campus Tree Team] This limited study was updated in 2015 using similar techniques, and incorporated new plantings, and areas not surveyed in the previous project.

To improve our inventory database, we hope to gather information on "Trees of Interest", which are defined as being those noted for exceptional instructional value or within striking distance of an existing built structure.

Addition variables needed for "Trees of Interest" are the following:

- Diameter at Breast Height (Dbh)
- Height of Tree

- Canopy Diameter
- Overall Tree Health
- Status: Native, Cultivated, Exotic, Invasive

As the polytechnic model promotes the "learning by doing" philosophy, it would be ideal to update our database with modern tools and methods, either through an academic/ student initiated process or through an internal FM process.

Target 1- Grounds Department will update the campus tree inventory annually, and begin to identify and assign specific data to trees of interest.

Goal 2- Continue Arbor Day and tree-awareness events at Cal Poly Humboldt.

Arbor Day events have previously occurred at Cal Poly Humboldt, in 2010, as well as in 2014. In both instances, tree planting activities took place in suitable locations, with involvement by student volunteers, community members, and FM Grounds Staff. Information and practical experience was provided to further the concepts of urban tree benefits, and demostrate actionable sustainability concepts through public service.

[Practicum 2010, Campus Tree Team]

Future Arbor Day and tree-awareness events will allow Cal Poly Humboldt to continue this tradition, and will engage the student population and community in promoting positive outlook in regards to tree care and urban tree canopy developments.

Target 2- The Grounds team will lead a campus tree tour at least once per academic year. This tour will identify and highlight notable trees on campus and be completed in coordination with the campus Sustainability Department.

9. **Communication strategy**

The Cal Poly Humboldt TCP will be posted on the FM Website, where the campus Landscape Management Practices document is also located, along with other information relating to campus grounds and linked with the campus Sustainability website, where a number of other sustainability programs and initiatives are detailed. Additionally, we will share this document with other CSU campuses and those interested in Tree Campus USA who request it.

10. Definitions of terminology related to campus trees

ANSI: The American National Standards Institute is a private nonprofit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States. https://www.ansi.org/

Arborist: A specialist in the care and maintenance of trees, usually with a higher level of knowledge or experience and often maintaining at least one industry accepted certification.

Basic Assessment (Level 2 Assessment): A detailed inspection of a tree and its surrounding site by using simple tools and inspecting completely around the tree.

Invasive Species: An introduced species that harms its new environment. Invasive species adversely affect habitats and bioregions, causing ecological, environmental, and/or economic damage.

Landscape and Tree Advisory Committee (LTAC): A campus committee which provides input to Facilities Management with regard to the planning, design, and maintenance functions associated with the University's and Residence Hall landscape and urban forest.

Limited Visual Assessment, (Level 1 Assessment): Inspecting trees from a specified perspective such as foot, vehicle, or aerial patrol.

Outdoor Classroom: Outdoor spaces which are used as part of educational curriculum, or to further promote educational culture on campus

Trees of Interest: Campus trees noted for exceptional instructional value or within striking distance of an existing built structure.

Tree Protection Zone (TPZ): An area around a tree or group of trees in which no grading, excavation, or construction activity is to occur without written approval and generally under the supervision of the project arborist.

Tree Risk Assessment: A process used to identify, analyze, and evaluate tree risk. An activity performed by a Tree Risk Assessor.

Tree Risk Assessment Qualification (TRAQ): A voluntary qualification program designed to train and assess candidates in a specialized field of arboriculture. Current credential holders should be able to gather and synthesize information needed to assess tree risk, and make reasoned judgments and recommendations for mitigating identified risk.

11. Appendix

A. <u>Grounds Hazardous Storm Event Plan</u>

Standard Operating Procedure: GR004

Title: Grounds Hazardous Storm Event Plan

Creation Date: 12/05/2024

Preface:
This document will describe the protocol for handling serious storm damage situations. These situations are rare, but this document serves as a clear plan for when they happen. This protocol does not apply to regular storm debris such as leaves, sticks and twigs, no matter the quantity. Those responsible for their zones will handle these types of debris in an incremental fashion outside of this protocol. This protocol only applies to woody debris, including dangerous or obstructive debris.

Protocol:
Normally, and especially after/during a storm event, personnel begin their shifts by scanning the zones for which they are responsible, making sure that their radio is on their person and audible. Personnel will look for major fallen branches or trees, or hangers in trees, or any other tree/landscape-related life and safety situations.

If there are special emergencies in any zone, personnel shall report it to the group through the best communications channel: radio and/or text (text is ideal). A photo will be included in the initial communication when possible. It's essential that photos be taken before any work begins on the site. It's essential these photos be added to the work order as time allows. If the situation involves any injuries or damage to private or University property that may trigger an insurance claim, UPD must be contacted to report the situation as well. UPD will coordinate communication with property owners prior to the beginning of any remediation work.

Once everyone has taken quick stock of the general state of their zone they are to offer assistance in the most dire emergency that has been reported to the group. In a large storm event there can be multiple dire emergencies going on simultaneously, all of these should be reported in the same communication channel (ideally group text message). All events must be communicated to work control for the generation of work orders as well, preferably same day for management review. The team may need to organize centrally to prioritize. This will be at the direction of the shop lead and/or management as needed.

Emergencies are prioritized in urgency based on the following debris states:
1. Downed power lines or other life/safety situations
2. Blocking major roadways necessary for campus operations on that specific day.
3. Potential hazardous situation such as hangers
4. Blocking access to buildings
5. Blocking pedestrian traffic.
6. Is large in scale or has damaged property.
7. Can be chipped into a nearby bed.

Those areas that are put on hold until the higher prioritized work is done will be assessed for safety to foot/vehicular traffic. As appropriate, areas will be signed and/or barricaded and communicated to the Grounds Manager for University Administrator and UPD/Parking notification. This regulation of access is both for the safety of the campus community and to facilitate work to mitigate the issue.

Under all circumstances with storm debris, the goal should be for chippable materials to be chipped on site and preferably into a nearby bed. In a storm situation, this is location agnostic. If there are 5 small branches in one location and 5 in another, that totals to 10 branches, which would trigger a chipper response. If there is no nearby suitable bed then the materials can be moved to one of our campus chip piles.

In extra urgent situations where too much is happening at once for the staff on hand to clear necessary roads or walkways in time or if the debris is too large to chip (i.e. >8" diameter), FM Recycling Team assistance can be requested to haul materials away directly from the site of the emergency. When using this method, materials should not go to the chip piles because this would create an excessive level of difficulty when untangling branches to get them loaded into the chipper.

On a campus-wide basis: once one member of the team has begun a certain task, they should continue with that task until it is no longer needed. If there is a more advanced task that nobody else can do, such as operating a specific lift, they shall trade roles with another member of the team. For example, if one member decides to begin chipping materials, they should continue touring different campus sites until all materials have been chipped. They can switch gears briefly to help get materials moved into position, but remain ready to accomplish their prime directive. This protocol would also apply to a lift team, and ground team as necessary.

<u>Team objectives</u>

Safety guidelines
Should work require a lift to complete, an assessment will be made to determine if the lift can be safely operated in the storm situation. If the lift work is too high for the FM equipment or staff, or if the winds are too high to operate the lift, the Grounds Manager will coordinate necessary access restrictions with UPD, Parking, and/or other University Upper Management. A local tree service contractor will then be called and immediate mitigation will be planned. Some areas of campus may be closed by Grounds should wind speeds rise above unsafe levels. These areas will be barricaded/signed off-limits to pedestrians in these instances.

Ground team
The Ground Team will be responsible for cutting and positioning materials for the chipper to shoot them into an appropriate bed or hardscape location for short-term storage until it can be properly placed. An appropriate bed is defined as a bed with open space large enough to accommodate chips without smothering desirable ground covers. This can be divided among multiple nearby beds if no single bed can accommodate all of the materials. The locations can be specified by the primary person responsible for the zone if it will not significantly impact necessary efforts. If the person responsible for the zone is not present, those who are will make the choice. Materials should be positioned with the butt end facing toward where the chipper will be positioned. This can exist in a long row if necessary, where the chipper can be procedurally backed up as materials are consumed. The ground team may also assist in feeding the chipper.

Lift team
A lift team consists of a minimum of two lift trained personnel, one of which watches and directs traffic from the ground. In vehicle traffic situations there should be two personnel guiding street traffic. There is a special exception for the van lift, vehicle 17, only requiring a single operator, but preferring two, especially in traffic situations.

Chipping team
The chipping team can consist of one or more personnel operating Grounds vehicle 24 and the Morbark Model 2070 chipper. They will move from site to site, sometimes even stopping for one or two large branches, as such situations can be handled very quickly and with little effort if the chipper and personnel have already been deployed.

The storm response protocol only concludes once all members of the team have agreed that all necessary materials have been handled. If any new situations arise that have not yet been noticed, the team should be prepared to re-engage with the protocol.

B. __Campus Standard Plant List__

The Landscape and Tree Advisory Committee and FM Grounds created and maintains a detailed list of plant species that have been selected to represent the Cal Poly Humboldt campus. The list includes information on how the plant species is to be used, or not used, in the case of invasive status or those which have reached "maximum desired density". This list is primarily intended as a tool for future development, and not as a definitive list of species present on campus. To request more information on the Campus Standard Plant List please contact Cal Poly Humboldt Facilities Management.

C. __Planting Specifications__

Standard Operating Procedure: GR001

Title: Tree Planting Specifications

Creation Date: 04/15/2024

The following specifications shall be followed by FM Grounds when planting trees:

Species Selection- All new tree plantings will be selected from the Campus Standard Plant List, with considerations for site location, climate adaptability, native status, species diversity, and aesthetics. Physical criteria important when choosing tree specimens include:

- General health
- General structural condition
- Root collar/trunk flare condition
- Crown shape
- Size of rootball/quality of root system
- Foliage health, color, or density
- Any other related issue that will impact the estimated rate of success.

Trees that do not meet the condition, quality, and other criteria should be rejected for planting. Invasive trees, or those which have reached maximum desired density are noted on the Campus Standard Plant List, and will not be considered.

Planting Location- Trees will be planted in locations that allow for full canopy size and shape, and in locations where the tree's natural growth habit is not expected to not cause infrastructure damage.

Planting Depth- The final depth of the planting hole is determined by the depth and firmness of the rootball and other characteristics of the site and shall not exceed the

depth of the rootball. The depth of the rootball shall be measured from the bottom of the trunk flare to the bottom of the ball. The soil directly beneath the rootball should be undisturbed or prepared to prevent settling. The bottom of the trunk flare shall be at or above the finished grade.

Planting Hole Width- The planting hole width should be a minimum of 1.5 times the diameter of the rootball, or soil surrounding the upper 1/3 of the planting hole should be loosened to a width of 1.5 times the rootball diameter. The sides of the planting hole should be loose, and not "glazed" with smooth digging tools.

Roots- Roots should be examined to ensure a healthy tree specimen. Circling and kinked roots should be straightened or severed to prevent future girdling. Bare-root plants should be installed so that their root system is evenly distributed in the planting hole.

Backfill- Soil backfill should be similar to the soil at the planting site or amended to meet a specific objective, and shall not be compacted to a density that inhibits root growth. Organic amendments incorporated into backfill and/or surrounding soil should not exceed 10 percent by volume.

Staking/ Supports- Tree supports will be used when required due to tree size, or exposure conditions. Stakes should not be driven into the root system of a newly planted tree. Ties or supports shall be loose-fitting to allow adjustments, and limit damage to bark. All stake and supports should be evaluated annually, and be removed within 2 years, depending on size of tree at planting.

References

ANSI A300, Part 6, Revised 2012

International Society of Arboriculture (ISA) Arborist Certification Handbook, 2010

Cal Poly Humboldt, Campus Standard Plant List

D. Pruning Specifications

Standard Operating Procedure: GR002

Title: Tree Pruning Specifications

Creation Date: 04/14/2024

The following specifications shall be followed by FM Grounds when pruning trees:

- Pruning shall not take place without clear objectives. Objectives may include:

- Reducing the potential for tree or branch failure
- Providing clearance
- Reducing shade or wind resistance
- Maintaining health
- Influencing fruit or flower
- Improving view
- Improving aesthetics

- Pruning tools used in making pruning cuts shall be sharp and clean.
- A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent limb, without cutting into the branch bark ridge or collar, or leaving a stub.
- A pruning cut that reduces the length of a branch or parent stem should bisect the angle between its branch bark ridge and an imaginary line perpendicular to the branch or stem.
- The final cut shall result in a flat surface with adjacent bark firmly attached.
- When removing a dead branch, the final cut shall be made just outside the collar of living tissue.
- Tree branches shall be removed in such a manner so as not to cause damage to other parts of the tree or to other plants or property. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark. Where necessary, ropes or other equipment shall be used to lower large branches or portions of branches to the ground.
- A final cut that removes a branch with a narrow angle of attachment should be made from the outside of the branch to prevent damage to the parent limb
- Severed limbs shall be removed from the crown upon completion of the pruning, at times when the tree would be left unattended, or at the end of the workday.

Specialty Pruning- These pruning styles are exceptions to standard pruning techniques, and may be utilized in special circumstances as determined by FM Grounds:

Crown Restoration- Restoration shall consist of selective pruning to improve the structure, form, and appearance of trees that have been severely headed, vandalized, or damaged.

Vista Pruning- Shall consist of selective pruning to allow a specific view. Size range of parts, location in tree, and percentage of foliage to be removed should be specified.

Pollarding- Consideration shall be given to the ability of the individual tree to respond to pollarding. Management plans shall be made prior to the start of the pollarding process for routine removal of water sprouts.

Prohibited pruning practices, and restrictions.

- Topping (a technique to reduce tree size, where branches and/or trunk(s) are indiscriminately cut to a predetermined crown limit, often at internodes) shall be considered an unacceptable pruning practice for trees.
- Lion's Tailing (a pruning practice where interior branches are excessively thinned or removed, and foliage is left only on the terminal end of the crown) shall be considered an unacceptable pruning practice for trees.
- Climbing spurs are to be avoided when climbing and pruning trees. Exceptions may include when limbs are more than throwline distance apart and there is no other means of climbing the tree, and when the bark is thick enough to prevent damage to the cambium
- No more than 25 percent of the foliage should be removed within an annual growing season. The percentage and distribution of foliage to be removed shall be adjusted according to the plant's species, age, health, and site.
- No more than 25 percent of the foliage of a branch or limb should be removed when it is cut back to a lateral. That lateral should be large enough to assume apical dominance.

References

ANSI A300, Part 1, 2008

International Society of Arboriculture (ISA) Arborist Certification Handbook, 2010

E. Protection and Preservation

Standard Operating Procedure: GR003

Title: Tree Preservation Specifications

Creation Date: 04/14/2024

The following specifications shall be followed by FM Grounds in order to preserve campus trees during planned construction activities:

- The area under construction should be surveyed, and existing trees should be inventoried.
- An area of 1 foot diameter for every inch of trunk for young trees, and greater for mature or sensitive specimens should be temporarily fenced with hi-viz barrier fencing and stakes. If the Tree Protection Zone (TPZ) is a group or grove of trees, the area is defined by the combined, or overlapping diameters of trees on the perimeter of the group.

- The area should be clearly labeled as a tree protection zone, with signage stating "TREE PROTECTION ZONE, Critical Root Zone, Do Not Enter." No construction traffic, digging, trenching, and general soil disturbance may occur in the TPZ.
- Trenching near a TPZ is highly discouraged, rather tunneling under major roots is an accepted preferred method. Trenching or tunneling actions should be overseen by a representative assigned by the Director of Facilities Operations, to ensure the health and safety of the tree(s) within the TPZ
- Mulch can be used on a construction site to protect the soil surface and prevent compaction of unsurfaced areas near a TPZ. 6-12 inches of coarse wood mulch should be spread to disperse weight from heavy equipment. Additional weight dispersal can be achieved by using plywood or steel road plate over the mulch. All construction mulch is temporary, and should be carefully removed at the end of construction. Any grade changes that might affect a tree in a TPZ should be considered prior to construction, so that mitigating measures can be developed.
- Utmost care will be given to trees that are mature or of historical value, or trees that are used as specimens by the university as part of educational curriculum, notwithstanding concerns over building or pedestrian safety.

References

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Practicum 2010: Campus Tree Team

2010 Student project authored by: Sarah Cannon, Carroll Clark, Matthew Dicks, and Timothy Kreick-Sandborn (NOTE: original data was updated in 2015 by student volunteers)