

University of New Mexico (UNM)
Campus Tree Care Plan
2024

Overview

The University of New Mexico is a nationally recognized arboretum in which open-grown trees, shrubs, and turfgrasses are on public display for educational and recreational purposes. The campus landscape also provides many environmental benefits, such as sequestering of CO₂, stormwater runoff abatement, increasing air, soil and water quality, shading of surfaces to reduce radiant energy absorption, cooling of the atmosphere via transpiration, and reducing wind speed and infiltration into interior spaces, among others. Accordingly, this Campus Tree Care Plan provides guidelines to establish, protect, maintain, and remove trees on the UNM Campus. The Tree Care Plan will be a resource for campus staff, faculty, students, and contractors to reference when planning and implementing activities that may impact UNM trees and will establish how trees must be protected from campus activities such as excavation, construction, and student and public events.

Tree Care Plan Responsible Departments

Facilities Management and the Office of Sustainability will be responsible for enforcing and updating the Tree Care Plan. In Facilities Management, the Grounds and Landscaping sub-unit of Environmental Services, specifically the Grounds and Landscaping Manager and Campus Arborist, will be critical to maintaining and executing the plan. The Director of the Office of Sustainability is responsible for convening the Campus Tree and Arboretum Advisory Committee and assisting with education and outreach aspects of the plan. Other units within UNM Institutional Support Services—including Campus Capital & Space Planning and Facilities, Design & Construction—and the Health Sciences Center (HSC) Capital Projects office are responsible for following and communicating the contents of the plan to contractors.

Campus Tree and Arboretum Advisory Committee

The UNM Campus Tree and Arboretum Advisory Committee was established in 2024 and is composed of one student (appointed for one fiscal year), one faculty member (appointed for two fiscal years), two Facilities Management representatives (Grounds & Landscaping Manager and Campus Arborist, both ex-officio), an Office of Sustainability representative (Director of Sustainability, ex-officio), and a community member (appointed for two fiscal years). The committee will convene at least biannually to discuss updates to the Plan and provide recommendations for campus arboretum activities. Planning and documentation for each meeting, including minutes, supporting handouts, and presentation materials, shall be maintained by the UNM Office of Sustainability on behalf of the Committee. See Appendix B for a list of committee members.

Tree Care Policies

Planting

Location

- Trees should be planted the following distances away from buildings to allow for regular building inspection and maintenance (see Appendix D for tree sizes).
 - Small trees: no closer than 5'
 - Medium trees: no closer than 15'
 - Large trees: no closer than 30'
- Plants shall be located to preserve visibility for pedestrian and vehicular safety, as well as appropriate utility clearances (see Table 1). Consider the viewsheds of security cameras when placing trees.

Table 1. Utility Clearances for Plantings

	Gas	Water	Storm Drain	Sanitary Sewer	Below-ground Electric	Above-ground Electric (OHE, transformer)	Fire Hydrant
Tree Planting	Trunk shall be min. 10' from line	Mature canopy shall be min. 5' from line	Mature canopy shall be min. 5' from line	Mature canopy shall be min. 5' from line	Trunk shall be min. 10' from line	Mature height shall be 15' or less under OHE; Mature canopy shall be min. 10' from edge of transformer pad	Trunk shall be min. 6' from hydrant

Soils & Amendments

- Soil amendments should only be used when soil compaction is an issue.
- If soil amendments are used, the following guidelines apply: Planting Soil Mixture shall be a mixture of one part backfill amendment to two parts existing soil (1 part backfill: 2 parts existing soil). Acceptable backfill amendment products include the following:
 - (1) "APS Mix", a homogenous blend consisting of 70% aged compost (1/2" minus) and 30% white vitric tuff (Moisture-lite), as produced by Gro-Well, Inc., 9000 Bates Rd, SE, Albuquerque, NM 87105 (505-877-8670), or equal.
 - (2) "Lawn and Garden 1/4" Minus Compost", a homogenous blend of composted manures, greenwaste and organic products, as produced by Gro-Well, Inc., 9000 Bates Rd, SE, Albuquerque, NM 87105 (505-877-8670), or equal.
 - (3) "Premium Compost", a homogenous blend of local manures, well-aged greenwaste and organic products, as available from Soilutions, 9008 Bates Rd, SE, Albuquerque, NM 87105 (505-877-0220), or equal.
 - (4) "Mediterranean Mix", a homogenous blend of compost, pumice, and composted woody materials, as available from Soilutions, 9008 Bates Rd, SE, Albuquerque, NM 87105 (505-877-0220), or equal.
- If soil conditioner is used, it should be granular 85% sulfur bentonite fertilizer, Tiger-sul Tiger 85CR Sulfur Organic, or equal.

Planting Operations

- Before planting operations, landscape areas shall be cleared of rocks and lumps greater than 1" diameter, vegetation, and debris to a minimum depth of 12", and finish grading shall be complete.
- Planting operations shall be performed only during favorable weather conditions per accepted practice. Deliver plant materials to be planted on the same day to the site.
- Unless otherwise approved by a UNM representative, locate all plant materials per the planting plans except when adjustments due to field conditions are required.
- The site of all trees and shrubs shall be staked by the Contractor and reviewed by a UNM representative before installation. Represent tree locations using 1" x 2" x 12" wood stakes or colored flags. Indicate the tree's name on the stake or flag to identify it easily.

Planting

See Appendix C for planting specifications. Perform all planting and backfilling per accepted nursery practice, the Drawings, and the following requirements:

- (1) Take care when backfilling planters to provide adequate compaction of the fill material to prevent settling.
- (2) Prepare all planting pits and install plants as shown on the Drawings. Set plants plumb and straight.
- (3) Remove wire basket, wood box, plastic, twine, or rope before backfilling. Remove the burlap except for the bottom of the root ball before backfilling.
- (4) Backfill for planting pits shall consist of the specified planting soil mixture (with optional 0.16 pounds of soil conditioner) per cubic foot of backfill. The plant shall be positioned in the hole and backfilled. The backfilling shall be completed. When the pit is nearly filled, water thoroughly and allow water to soak away. Add more backfill to finish grade if settling of backfill occurs after watering.
- (5) Trees planted within turf areas should have a 6' ring of chipped or shredded wood mulch from the base of the trunk and root collar shall not be covered with mulch.
- (6) Staking may be necessary at planting, but should be minimized to allow the tree to move and stakes should be removed after 1 year.

Maintenance

An effective maintenance program can detect problems and correct them before they become damaging or fatal. Tree maintenance at UNM will include regular inspection that will examine new leaves or buds, leaf size, twig growth, and crown dieback. General pruning guidelines include:

- Pruning shall not be done without a clear objective.
- Prune first for safety, next for health, then for aesthetics.
- Pruning shall be done following the ANSI A300 2023 Pruning standard.
- Pruning shall be done by a UNM Certified Arborist, with the exception of clearance pruning and minor pruning that can be done from the ground by the Grounds and Landscaping maintenance crew.
- Do not prune the central leader of any tree unless there is reason to do so, such as codominant stems, corrective, or size control.

Removal

Removal of a tree should be the last resort, but is recommended when a tree is:

- Dead, dying, or considered irreparably hazardous.
- Is causing an obstruction or is crowding and causing harm to other trees in a way that is impossible to correct through pruning.
- Is to be replaced with a different tree.
- Must be removed to allow for construction.
- Is causing damage or hazards to existing site features, with no reasonable remedy.

Recommended Species

Trees to be planted shall generally be chosen from the Climate-Ready Tree Species List of the City of Albuquerque (see Appendix D), though the list does not include all species that may be acceptable; the UNM Grounds and Landscaping Manager or Campus Arborist can approve or disapprove planting of any species, whether or not it is on this list. In general, native and drought-tolerant trees are preferred for regional character and water conservation; however, certain sites within the campus arboretum may occasionally merit higher-water-use trees. Unless specifically noted on the Drawings, all trees shall have a single trunk that is straight and free of “dog legs,” “crooks,” “Y-crotches,” or other disfiguring shapes. Trees with double leaders are not acceptable.

Prohibited Species

Trees generally considered invasive for the region shall not be planted, such as Tamarisk (salt cedar, *Tamarix ramosissima*) or Russian Olive (*Elaeagnus angustifolia*). In addition, flowering locust trees (*Robinia pseudoacacia*) and other species that have poor branch attachments and susceptibility to pests should be avoided.

Protection and Preservation

When events, excavation, or other work is planned that may potentially impact trees, landscaping, or irrigation, the unit or area performing the work must contact the Grounds and Landscaping Manager before the work or event begins to have a pre-installation conference to discuss possible tree protection measures to be implemented. This may include a tree protection zone.

Examination and Preparation

- Any Contractor hired by UNM shall be responsible for the care and preservation of existing trees indicated to remain.
- Erosion and sedimentation control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross-protection zones.
- Trees Indicated to Remain: The following trees shall remain:
 - As indicated in the Contract Documents.
 - As tagged by a UNM representative in the field before the start of demolition operations.

Protection Zones

- A protection zone should extend to the drip line of the tree (see Figure 1) and should not be entered unless watering the tree. If a contractor has questions about the dimensions of the tree protection zone or in instances where there may be an oblong or one-sided critical root area, consult the UNM Grounds & Landscaping Manager or Campus Arborist for assistance determining the protection zone.
- Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations or traffic/compaction.
- Install Protection-zone fencing and signage before the job begins.
- Protection-zone fencing: Install protection-zone fencing along the edges of protection zones to prevent people from easily entering protected areas except by entrance gates. Provide temporary barriers around each tree or each group of trees at the drip line.
- Access gates: Install as needed for access.
- Protection-zone signage: Install protection-zone signage in visibly prominent locations in a manner approved by a UNM representative (see Appendix E). Maintain protection-zone fencing and signage in good condition and remove them when construction operations are complete, and equipment has been removed from the site.
- Supervise excavating, grading, filling, and subsequent construction operations to ensure that the tree protection zone is not impacted and that there is no damage to plant roots, bark, or other features.
- Mulch areas inside protection zones with a 4" average thickness of organic mulch. Do not place mulch within 6" of tree trunks.

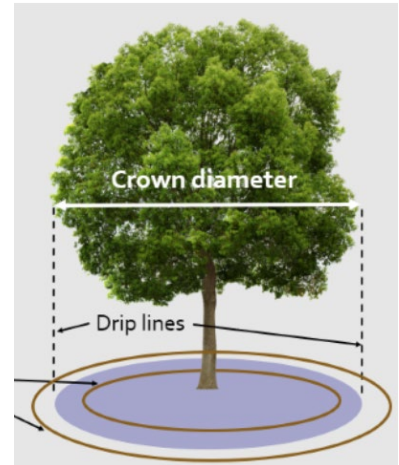


Figure 1. Tree protection zone should be to dripline.

Trenching

- Trenching near trees: Where trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut tree roots over 1" in diameter without approval.
- Other methods include air excavation and Hydrovac.

Root Pruning

- Prune only with the UNM Grounds & Landscaping Manager or Campus Arborist approval and direction. Prune only roots outside the tree protection zone that are affected by temporary and permanent construction. Prune roots as follows:
 - (1) Cut roots by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. When major root structures (>2") are hit, do not use a backhoe or other equipment that rips, tears, or pulls roots and switch to hand-trenching or boring.

- (2) Temporarily support and protect roots from damage until they are permanently covered with soil.
- (3) Maintain a natural cover of dirt or duff around root systems. Replace the natural cover if necessary.
- (4) Cover exposed roots with burlap and water regularly.
- (5) Backfill as soon as possible.
- (6) Employ a certified arborist to cut and remove roots.
- (7) Do not cut roots greater than 1" in diameter without advance notice and approval.
- Stockpiles: Place stockpiles of topsoil and other excavated material to prevent sloughing onto existing trees' root systems.
- Contaminants: Dispose of solvents, oils, and other materials harmful to plant life in containers and remove them from the site. Remove and replace contaminated soil with topsoil at Substantial Completion of Work.

Crown Pruning

- Prune only branches that are affected by temporary and permanent construction. Prune branches as follows:
 - (1) Prune only with the UNM Grounds & Landscaping Manager or Campus Arborist approval.
 - (2) Employ a certified arborist to prune and remove branches.
 - (3) Monitor the crown and provide subsequent maintenance during the Contract period as recommended by a certified arborist.
 - (4) Cut branches with sharp pruning instruments; do not break or chop.
 - (5) Never apply pruning paint to wounds.
 - (6) Use approved best practices for protecting the tree and the environment.

Re-Grading

- Lowering grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- Raising grade: Where new finish grade indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- Minor fill within protection zone: Where the existing grade is 2" or less below the elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations. Do not add soil to the root collar zone to minimize disease and rotting of the root crown.

Watering

- Keep trees well watered during construction to reduce stress.
- Water at least two times per week during the summer, one time per week during fall/spring, and every two weeks during the winter throughout the construction period. To water, form suitable dikes and soaking devices at the drip line and apply water to a depth of approximately 6" each time. Reduce the water frequency during the winter and rainy seasons if approval is obtained by the UNM Grounds and Landscaping Manager.

Field Quality Control

- Inspections: Engage a Certified Arborist to direct plant protection measures in the vicinity of trees indicated to remain and to prepare inspection reports.

Tree Damage Assessment

In general, repair or replace trees that are damaged by construction operations as approved by the UNM Grounds & Landscaping Manager or Campus Arborist.

- (1) A UNM representative may determine repair and replacement requirements.
- (2) The Contractor shall have a certified arborist perform root cutting, branch pruning, and all other repairs required due to tree damage.
- (3) Perform repairs within 24 hours of damage.
- (4) If a damaged tree must be removed and replaced, obtain a valuation by a certified arborist specializing in this aspect of tree care and replace the tree with a tree of the same species and size. If the existing tree size is unavailable, the Contractor shall replace it with a 2" cal. one (deciduous) or 6' ht. (evergreen) and shall provide a credit to UNM for the monetary difference in value.

Prohibited Practices

- No nailing signs to trees.
- No attaching ropes, signs, chains, or bicycles to trees.
- No tree removal or maintenance without prior approval from the UNM Grounds and Landscaping Manager or Campus Arborist.
- No tree topping unless there is die out or major cuts are required to maintain tree health.
- The following actions are prohibited within the tree protection zone during construction:
 - (1) Vehicular traffic or parking.
 - (2) Storage of construction materials, debris, or excavated material.
 - (3) Dumping of refuse or chemicals, or liquids.
 - (4) Puddling or continuous running water.
 - (5) Diesel or gasoline equipment running adjacent to the protection zone.
 - (6) Foot traffic unless for tree care.
 - (7) Erection of sheds or structures.
- No hanging hammocks or other items from trees without tree cambium protection devices.
- Temporary caution flagging may be acceptable for limited duration.

Goals and Targets

- Apply for Tree Campus USA designation and complete requirements.
- Apply for ArbNet Level 1 Arboretum designation.
- Plant 20 new trees each fiscal year and have at least 1:1 replacement for trees lost to construction.
- Complete and update tree inventory to reflect recent construction and any changes.
- Complete and post an online tour of the campus arboretum in collaboration with the UNM Landscape Architecture Program.
- Increase campus community awareness of significance of the campus arboretum and efforts and resources required to maintain it.

Communication Strategy

The Campus Tree Care Plan will be listed on the Facilities Management Standards & Guidelines webpage, be linked to from the overall Institutional Support Services Standards & Guidelines webpage, and appear on the Office of Sustainability webpage. In addition, a briefing will be given to all relevant entities within Facilities Management, Campus Capital & Space Planning, and Facilities, Design & Construction at both UNM Main Campus, the Health Sciences Center, and UNM Hospital.

Appendix A. Glossary

Backfill: The soil used to fill in around the root ball of the newly planted tree or shrub.

Canopy: Tree canopy is a measurement which encompasses the layer of leaves, branches and stems of trees that shelter the ground when viewed from above. A canopy is a collection of crowns.

Central Leader: The main leader, or dominant shoot, in the center of the tree.

Compaction: The compression of soil, causing a reduction of pore space and an increase in the density of the soil. Tree roots cannot grow in compacted soil.

Crown: The branches, leaves, and reproductive structures extending from an individual tree's trunk or main stems.

Mulch: Any material such as wood chips, straw, sawdust, leaves, and stone that is spread on the surface of the soil to protect the soil and plant roots from the effects of raindrops, soil crusting, freezing, and evaporation.

OHE: Overhead equipment, specifically electric transmission and distribution infrastructure.

Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.

Pruning: Selective removal of woody plant parts of any size, using saws, pruners, clippers, or other pruning tools.

Root System: The portion of the tree containing the root organs, including buttress roots, transport roots, and fine absorbing roots; all underground parts of the tree.

Soil Conditioner: Soil amendments that improve the soil structure by increasing aeration, water holding capacity, and nutrients.

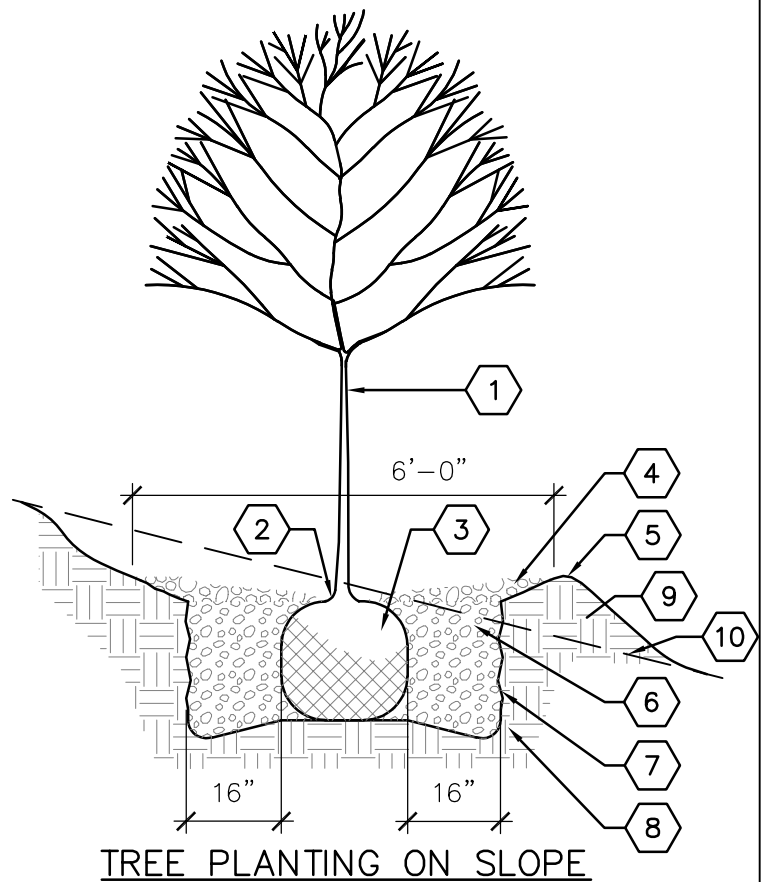
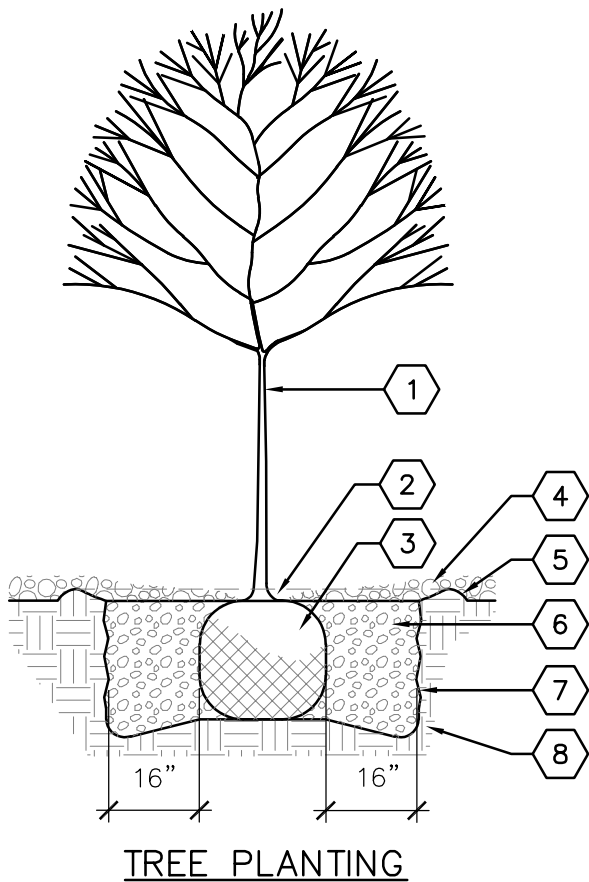
Transpiration: The process of water movement through a plant and its evaporation from aerial parts, such as leaves, stems and flowers.

Appendix B. UNM Campus Tree and Arboretum Advisory Committee FY2025

- **Student:** Richard Perce, Graduate Student, Community & Regional Planning
- **Faculty:** Yolanda Lin, Assistant Professor, Geography & Environmental Studies
- **Facilities Management:** Richard Schorr, Grounds & Landscaping Manager*
- **Facilities Management:** Alan Billau, Campus Arborist*
- **Office of Sustainability:** Anne Jakle, Director*
- **Community Member:** Joran Viers, Legacy Tree Company

* Ex-officio member that serves by virtue of position.

Appendix C: Tree Planting Specifications



KEYED NOTES

1. TREE – SEE PLAN FOR SPECIES AND LOCATIONS
2. REMOVE EXISTING SOIL FROM NURSERY AS NEEDED TO EXPOSE ROOT FLARE. INSTALL WITH ROOT FLARE 2"–3" ABOVE GRADE
3. PLACE TREE IN HOLE AND STRAIGHTEN. REMOVE WIRE BASKET, WOOD BOX, PLASTIC, TWINE AND/OR ROPE, AND BURLAP PRIOR TO BACKFILL
4. MULCH – SEE PLAN. AVOID MULCH INSTALLATION 4"–6" OF DISTANCE FROM TREE TRUNK
5. EARTHEN BERM, 6" HEIGHT
6. THOROUGHLY MIX BACKFILL AND SOIL AMENDMENTS PRIOR TO INSTALLATION – SEE SPECIFICATIONS
7. SCARIFY EDGE OF PLANTING HOLE, CONTINUOUS ALL SIDES
8. UNDISTURBED SUBGRADE
9. PROPOSED GRADE. SMOOTHLY TAPER SLOPE TO FORM TREE WELL
10. EXISTING GRADE



TREE PLANTING

NOT TO SCALE



**UNIVERSITY OF NEW MEXICO
FACILITIES MANAGEMENT**
GROUNDS AND LANDSCAPING
LANDSCAPE STANDARDS

THIS DETAIL TO BE USED AS A GUIDE ONLY. SPECIFIC REVISIONS FOR SITE CONDITIONS AND INTENT ARE THE RESPONSIBILITY OF THE INDIVIDUAL PROJECT DESIGNER.

Appendix D: Suggested Climate-Ready Tree Species List for Albuquerque

Family	Species	Size
Aceraceae	Big tooth maple ('Acer grandidentatum')	Medium
Aceraceae	Box elder ('Acer negundo')	Medium
Anacardiaceae	Chinese pistache ('Pistacia chinensis')	Medium
Anacardiaceae	Purple smoke tree ('Cotinus coggygria')	Small
Caprifoliaceae	Mexican elder ('Sambucus mexicana')	Small
Cupressaceae	Incense cedar ('Calocedrus decurrens')	Large
Eleagnaceae	Silverthorn ('Eleagnus pungens')	Small
Fabaceae	Honey locust ('Gleditsia triacanthos')	Large
Fabaceae	Japanese pagoda Tree ('Sophora japonica')	Large
Fabaceae	Kentucky coffee tree ('Gymnocladus dioica')	Medium
Fabaceae	Oklahoma redbud ('Cercis reniformis')	Small
Fagaceae	Bur oak ('Quercus macrocarpa')	Medium-Large
Fagaceae	Chinquapin oak ('Quercus muelenbergii')	Medium-Large
Fagaceae	Texas red oak ('Quercus texana or buckleyii')	Medium-Large
Ginkgoaceae	Ginko ('Ginko biloba')	Large
Juglandaceae	Arizona walnut ('Juglans major')	Medium
Juglandaceae	English walnut ('Juglans regia')	Medium
Lythraceae	Crape myrtle ('Lagerstroemia indica')	Small
Oleaceae	Arizona ash ('Fraxinus velutina')	Medium
Oleaceae	Raywood ash ('Fraxinus angustifolia')	Medium
Pinaceae	Blue Atlas cedar ('Cedrus atlantica')	Large
Pinaceae	Deodar cedar ('Cedrus deodara')	Large
Pinaceae	Austrian black pine ('Pinus nigra')	Medium
Pinaceae	Italian stone pine ('Pinus pinea')	Medium-Large
Pinaceae	Scots pine ('Pinus sylvestris')	Large
Plantanaceae	Arizona sycamore ('Platanus wrightii')	Large
Plantanaceae	London plane tree	
Rosaceae	Serviceberry ('Amelanchier utahensis')	Small
Rosaceae	Apricot ('Prunus spp')	Small
Rosaceae	Mountain ash ('Sorbus spp.')	Medium
Rosaceae	Purple leaf plum ('Prunus cerasifera')	Small
Rosaceae	Wild plum ('Prunus americana')	Small
Salicaceae	Rio Grande cottonwood ('Populus wislizeni')	Large
Sapindaceae	Golden rain tree ('Koelreuteria paniculata')	Small-Medium
Ulmaceae	Common hackberry ('Celtis occidentalis')	Medium
Ulmaceae	Lacebark elm ('Ulmus parvifolia')	Medium
Ulmaceae	Netleaf hackberry ('Celtis reticulata')	Medium
Ulmaceae	Zelkova ('Zelkova serrata')	Medium

This list is not an exhaustive, exclusive list of tree species that will be approved to be planted at the University of New Mexico, and it will be amended over time.

Source: City of Albuquerque: <https://www.cabq.gov/parksandrecreation/resources-rules/tree-information>

KEEP OFF
TREE ROOT
PROTECTION ZONE
UNM GROUNDS & LANDSCAPING
277-0605