CITY OF UNIVERSITY CITY

ACCEPTABLE TREES FOR PLANTING IN PARKS,

CITY-OWNED PROPERTY, OR PUBLIC RIGHTS-OF-WAY

BACKGROUND

The City of University City manages over thirty thousand (30,000) trees that cover parks, natural areas, City-Owned Property and Public Rights-Of-Way. Trees and forests are long-term investments to the urban society that must be managed with the same skill and diligence as any city asset.

Public trees in University City can be classified into four categories:

- **Street/ROW Trees:** These trees require the greatest level of maintenance and have the highest level of tree/people interaction. Because of the constrained and difficult growing conditions, these trees are most likely to suffer from mechanical damage, biotic and abiotic disorders and vandalism. The management of the street tree population directly affects the adjacent property owners and the character of the community.

- **Formal Park/Public Areas:** These trees require frequent maintenance and have a high likelihood of tree/people interaction. These trees also have a potential for mechanical injury and demand a high level of care and consideration during design and construction activities.

- **Periphery of Formal Park/Public Areas/Natural Areas:** These trees require the least amount of maintenance because of their often remote and sheltered locations. The trees in these areas are managed not as individual trees, but rather as stands of trees linked to the associated plants and sites on which they reside. These trees can come in conflict with people when they occur along property lines, adjacent to man-made structures or near gathering places.

- **Undesirable Trees:** While many tree species are quite applicable and adaptable for most environments, the following variety of trees may not be appropriate for use within the City of University City. Primary reasons for discouraging the use of these undesirable tree species include: Root System, Soil Type, Heat/Cold Tolerance, and Drought Tolerance.

DESIGN

Selection

Selecting trees that adapt well to their site and fulfill their landscape function is extremely important to the success and maintenance of a planting. The quality of young plants is also crucial. A plant species should be selected on the basis of its functional uses, its adaptation to the site, and the amount of care it will require.

Landscape Functions

There are four main functions to consider when selecting trees to include in the landscape design.

- **Architectural features:** privacy, view enhancement, and space articulation.

- **Engineering:** reduce glare, direct traffic, filter air, reduce soil erosion, and attenuate noise.

- **Climatic influences:** transpirational cooling; interception of solar radiation, reflection, and re-radiation; and modification of rain, fog and snow deposition.

- **Aesthetic uses**: form, color, and texture.

Site Adaptation

It is important to plant the right tree in the right place. The intended landscape use and nature of a site should be considered when selecting for growth habit and ultimate size. Mature size is an important consideration. The tree should not outgrow its allotted space given such constraints as vistas and power-lines. The following table shall be used as a guide in selecting the right tree:

Tree Selection Factors

FEATURE	BENEFIT
Rate of Growth	Fast-growing trees tolerate difficult sites, are usually weak-wooded and subject to limb breakage; and generally are shorter lived. The opposite is generally true for slow-growing trees.
Wood Strength	When a tree decays or weakens, it can become a hazard to the surrounding area. Strength is based on the trees ability to withstand wind loads, snow bearing loads, water saturation or drought, and its adaptability to its surroundings.
Rooting	Roots are what keep the tree anchored in the ground. Through tem pass nutrients and water that nourish and support the tree. Stressors such as drought, flooding, disturbance, disease, or damage can greatly affect tree roots and the health of the tree.
Plant Features	**Leaves:** Color, size, persistence **Thorns and prickly foliage:** Enhanced security vs. maintenance problems **Flowers and fruit:** Aesthetic consideration, wildlife habitat. Potentially increased maintenance.
Climatic Adaptation	- Plant hardiness and local minimum temperatures. - Moisture-natural or irrigated. - Light – reflect or allow for winter heating. - Wind – deflect or channel wind patterns.
Soils	Poor soils can cause failure of planting. Amendment not desirable or feasible. Match plant to soil condition.
Air pollution	Choose trees with appropriate tolerance level.
Pest Resistance	Resistant plant material will reduce maintenance.
Native Plants	Native or indigenous plants may not perform as well as exotic or non-native species. Most urban landscape sites are no longer "native". Soils, microclimates and water regimes have changed.
Selecting Quality Stock	Selection of quality planting stock is as important to success as selection of proper species, planting and maintenance. Root and shoot quality can determine not only performance but also survival.
Roots and defects	Kink roots, girdling (circling roots) can eventually "choke" a tree.
Top & Trunk Characteristics	- Height-to-Caliper ratio - Crown configuration - Branching pattern

ACCEPTABLE TREES

University City is pleased to present the following lists of recommended trees for enhancing University City, streets, avenues, boulevards, parking lots, parks, public facilities, businesses and private properties. Development of this composite list is the result of significant research, incorporating the advice from professionals including arborists, urban foresters, nurserymen, horticulturalists, professors, park planners and landscape architects. The intention of this effort is to provide urban planners, architects, landscape architects, city employees, developers, and University City businesses and residents with a list of trees appropriate for planting in specific areas, tailored to the University City environment. Since the world of living plants is quite dynamic, these lists will be reviewed periodically by the Parks, Recreation and Forestry Department and updated as deemed necessary after reviewing the results of ongoing urban forestry research.

The Parks, Recreation and Forestry Department completed the most recent review and update of the City's current list of recommended trees as of November 2019. The Parks, Recreation and Forestry Department's primary intention associated with development of this researched document is to provide University City citizens and staff with state-of-the-art tree recommendations as the community continues to enhance University City's urban forest.

I.   STREET TREES

These trees require the greatest level of maintenance and have the highest level of tree/people interaction. Because of the constrained and difficult growing conditions, these trees are most likely to suffer from mechanical damage, biotic and abiotic disorders and vandalism. The management of the street tree population directly affects the adjacent property owners and the character of the community.

While many tree species are quite applicable and adaptable for University City's challenging urban streetscape, there are a variety of trees not appropriate for use within the streetscape environment. Primary reasons for discouraging the use of these undesirable tree species include:

- Size (height, and width) and shape.
- Root system.
- Soil type.
- Heat and/or cold tolerance.
- Drought tolerance.
- Salt tolerance.

- Weak branching habit, resulting in frequent release of fallen branches.
- Producer of messy fruit, seeds, acorns etc.
- Prone to damage by insects, diseases and nutrient deficiencies.
- Leaf scorch and mildew.
- Poor transplantation

Tree selection when planting near a sidewalk, trail or parking lot, etc. is critical to having long term success. The amount of space available should be used to determine the size of the tree being planted. The following chart illustrates this information:

Tree Lawn Width	Mature Tree Height	Mature Tee Width
3-5 feet	10-30 feet	10-20 feet
5-7 feet	30-40 feet	10-20 feet
7-9 feet	40-50 feet	10-20 feet
9-11feet	50 feet or taller	20-25 feet
12 feet or wider	50 feet or taller	25 feet or wider

Another source indicates that the walk should be further away than three times the trunk diameter at maturity. Trees that have shallow roots should be avoided near sidewalks, trails and parking lots.

A.   SMALL COLUMNAR STREET TREES   (Less than 20' Width/15'-30' Height)

The following list of small columnar street trees are acceptable for planting in bump outs, small and/or narrow islands and medians, close to sidewalks and buildings, and within street grates.

1. **Sugar Maple –** *Acer saccharum* "*Barrett Cole", "Belle Tower", Apollo".

2. **Crimson Spire Oak –** *Quercus alba x Q robur* "Crimschmidt".

3. **Oak –** *Quercus robur x bicolor* "Nadler".

4. **English Oak –** *Quercus Robur - Fastigiata*.

5. **Magnolia –** *Magnolia stellate* "Magnolia Star".

6. **Eastern Redbud -** *Cercis canadensis* "Oklahoma".

7. **Bald Cypress -** *Taxodium distichum* "Lindsey Skyward".

8. **Pyramidal European Hornbeam –** *Carpinus betulus - <u>Fastigiata</u>* "Frans Fontaine".

9. **Poplar –** *Populus tremuloides erecta "*Prairie Sky".

10. **Weeping White Spruce –** *Picea glauca.*

11. **Juniper –** *Juniperus communis* "Brynhyfyd", Compressa".

B.   **MEDIUM TO LARGE COLUMNAR STREET TREES**   **(20' Width or greater)**

The following list of medium to large columnar street trees are acceptable for planting in medium to large islands and medians.

1. **Red Maple –** *Acer rubrum* "Redpoint", "Bowhall" and "Scarlet Sentinel".

2. **Red Maple –** *Acer freemani* "Armstrong".

3. **Sugar Maple –** *Acer saccharum* "Steeple", and "Flashfire".

4. **European Beech –** *Fagus sylvatica* "Red Obelisk", "Dawyck Purple". European Green.

5. **Ginkgo –** *Ginkgo biloba* "Princeton Sentry".

6. **Sweetgum –** *Liquidambar styraciflua* "Emerald Sentinel, "Clydesform", "Slender Silhoutte".

7. **White Spruce –** *Picea glauca* "Pendula".

8. **Oak –** *Quercus robur x bicolor* "Kindred Spirit".

9. **Oak –** *Quercus x warei* "Regal Prince".

10. **Purple-leaf Plum –** *Prunus cerasifera* "Crimson Pointe".

11. **Thornless Honeylocust –** *Gleditsia tricanthos var. inermis* "Skycole".

12. **Magnolia –** *Magnolia stellate* "Ivory Chalice".

13. **Redbud -** *Cercis* "*Eastern Redbud", "Forest Pansy", "Plena" and "Ruby Atkinson".

14. **Columnar Norway Spruce –** *Picea abies* Columnar.

15. **Poplar –** *Populus tremuloides erecta* Swedish Columnar.

C. <u>**NON-COLUMNAR AND MEDIUM TO LARGE STREET TREES**</u>   **(30' or greater in height and greater than 25' in width)**

The following list of non-columnar and medium to large street trees are acceptable for planting in large lawn and/or wide islands/medians.

1. ***Bur Oak –** *Quercus macrocarpa* "Urban Pinnacle".

2. ***Baldcypress –** *Taxodium distichum* "Shawnee Brave", "Peve Minaret", "Seacrest", and "Falling Waters".

3. **Littleleaf Linden –** *Tilia Cordata* "Greenspire".

4. **Japanese Zelkova –** *Zelkova serrate* "Green Vase".

5. **Red Oak –** *Acer x freemanii* "Jeffersred".

6. ***American Beech –** *Fagus grandifolia.*

7. **American Linden –** *Tilia Americana* "Redmond" and "Legend".

8. **Maple –** *Acer buergeranum "*Trident", "Rocky Mountain Glow".

9. **Japanese Tree Lilac –** *Syringa reticulate* "Chantilly Lace", "Ivory Silk", and "Summer Snow".

10. **Ginkgo –** *Ginkgo biloba* "Autumn Gold".

11. **Thornless Honeylocust –** *Gleditsia tricanthos var. inermis* "Shademaster" or "Moraine".

II.   FORMAL TREES

These trees require frequent maintenance and have a high likelihood of tree/people interaction. These trees also have a potential for mechanical injury and demand a high level of care and consideration during design and construction activities. These trees generally, do not produce nuts, fruits, etc.

<u>**CONIFERS**</u>

1. ***Baldcypress –** *Taxodium distichum* "Shawnee Brave", "Lindsey's Skyward" (Columnar), Green Whisper" (Weeping), "Peve Minaret", "Seacrest", and "Falling Waters".

2. **White Fir, Concolor Fir –** *Abies concolor.*

3. ***American Holly –** ilex opaca.*

4. **Colorado Spruce, Blue Spruce –** *Picea pungens* Columnar.

5. **Norway Spruce –** *Picea abies* Coulmnar.

6. **White Spruce –** *Picea glauca* "Pendula", "Conica" and "Densata". Weeping.

7. **Douglas Fir –** *Pseudotsuga menziesii.*

8. **Canadian Hemlock –** *Tsuga Canadensis.*

9. **Chinese Juniper –** *Juniperus chinensis.*

10. **Japanese Black Pine –** *Pinus thunbergiana.*

11. **Japanese Red Pine –** *Pinus densiflora* "Oculus Draconis", "Penula" and "Ubraculifera".

12. **Limber Pine –** *Pinus flexilis.*

13. **Red Pine –** *Pinus resinosa.*

14. **Eastern White Pine –** *Pinus strobus.*

15. **Juniper –** *Juniperus communis* "Brynhyfyd", Compressa".

16. **Holly -** *Ilex opaca* "Dragon Lady".

17. **Short Leaf Pine –** *Pinus echinata.*

18. **Dawn Redwood –** Metasequoia glyptostroboides.

SMALL TREES & FLOWERING TREES   (under 30' in height)

1. ***Flowering Dogwood –** Cornus florida* "Starlight", "Cherokee Chief", "Cherokee Princess" and "Cloud 9".

2. **Saucer Magnolia –** *Magnolia x soulangiana.*

3. **Magnolia –** *Magnolia stellate* "Ivory Chalice", "Magnolia Star", "Butterflies", "Yellow Bird", "Coral Lake", "Daybreak", "Moonglow", "Green Shadow", "Brackens Brown Beauty", and "Edith Bogue".

4. **Southern Magnolia –** *Magnolia grandiflora*.

5. **Sweetbay Magnolia** – *Magnolia virginiana*.

6. **Japanese Snowbell –** *Styrax japonicas*.

7. **Maple –** *Acer species* "Tartarian", "Amur", and "Shangtung".

8. __*Eastern Redbud__ **-** *Cercis* canadensis "Forest Pansy", "Oklahoma", "Plena", "Ruby Atkinson", "Alba", "Rising Sun", "Travelor", and "Ace of Hearts".

9. **Japanese Flowering Cherry –** *Prunus serrulata* "Kwanzan".

10. **Japanese Tree Lilac –** *Syringa reticulate* "Chantilly Lace", "Ivory Silk", and "Summer Snow".

11. **Japanese Snowbell –** *Styrax japonicas*.

12. **Crepe Myrtle -** *Lagerstroemia* "Sarah's Favorite", "Hybrid White" or "Dodd's White".

13. **Poplar –** *Populus tremuloides erecta* Swedish Columnar.

14. **Eastern Wahoo –** *Euonymus atropupures*.

15. **Carolina Silverbell –** *Halesia Carolina*.

16. **Paperbark Maple –** *Acer griseum*.

MEDIUM TREES (30' to 60' in height)

1. ***Yellowwood-** *Cladrastis kentuckea*.

2. **Ginkgo –** *Ginkgo biloba* "Princeton Sentry", and "Autumn Gold".

3. **Thornless Honeylocust –** *Gleditsia tricanthos var. inermis* "Skycole" and "Moraine".

4. **Crimson Spire Oak –** *Quercus alba x Q robur* "Crimschmidt".

5. **Oak –** *Quercus x warei* "Regal Prince".

6. **English Oak –** *Quercus robur - Fastigiata*.

7. **Pyramidal European Hornbeam –** *Carpinus betulus - Fastigiata*.

8. ***American Hornbeam –** *Carpinus caroliniana* "Native Flame".

9. **Maple –** *Acer buergeranum "*Trident" and "Rocky Mountain Glow".

10. **Red Maple –** *Acer freemani* "Armstrong". *"Freeman".*

11. ***River Birch –** *Betula nigra* "Heritage".

12. ***Paper Birch, Canoe Birch –** *Betula papyrifera.*

13. **Sourwood, Sorel Tree –** *Oxydendrum arboretum*

14. **Horsechestnut –** *Aesculus hippocastanum* "Baumannii".

15. **Katsura –** *Ceridiphyllum japonicum.*

16. **Yellowood –** *Cladrastis kentukea.*

17. **Amur Maackia –** *Maackia amurensis.*

LARGE TREES (over 60' in height)

1. ***American Basswood –** *Tilia Americana* "Redmond Linden".

2. ***American Beech –** *Fagus gandifolia*

3. **European Beech –** *Fagus sylvatica* "Asplenifolia", "Atropunicea", "Purpurea" "Purpurea Tricolor", and "Roseamarginata".

4. **Littleleaf Linden –** *Tilia Cordata* "Greenspire".

5. **Norway Maple –** *Acer platanoides* "Summershade", "Emerald Queen" and "Cleveland".

6. ***Red Maple –** *Acer rubum* "Red Point", "Autumn Flame", and "October Glory".

7. ***Sugar Maple –** *Acer saccharum* "Green Mountain", "Legacy", "Bonfire", Fall Fiesta" and "Caddo".

8. **Miyabei Maple -** *Acermiyabei* "State Street".

9. ***Northern Red Oak –** *Quercus rubra.*

10. ***Scarlet Oak –** *Quercus coccinea.*

11. ***Shumard Oak –** *Quercus shumardii.*

12. ***Swamp White Oak –** *Quercus bicolor.*

13. **Black Oak –** *Quercus velutina.*

14. **Chinkapin Oak –** *Quercus muehlenbergii.*

15. **Willow Oak –** *Quercus phellos.*

16. **Red Oak –** *Acer x freemanii* "Jeffersred".

17. **Tuliptree –** *Liriodendron tulipifera "*Emerald City".

18. **Japanese Zelkova –** *Zelkova serrate* "Green Vase".

19. **Hedge Maple –** *Acer Campestre* "Queen Elizabeth".

20. ***Baldcypress –** *Taxodium distichum* "Shawnee Brave", "Lindsey's Skyward" (Columnar), Green Whisper" (Weeping), "Peve Minaret", "Seacrest", and "Falling Waters".

21. **Amur Cork –** *Phellodendron amurense* "Macho"**.**

22. **Ginkgo –** *Ginkgo biloba* "Magyar", "Autumn Gold", "Lakeview", " Golden Colenade" and "Shangrila".

23. **American Linden –** *Tilia Americana* "Redmond" and "Legend".

24. **Black Maple –** *Acer nigrum* "Greencolumn".

25. **Katsura –** *Cercidiphyllum japonicum.*

26. **American Elm –** *Ulmus Americana* "New Harmony", Valley Forge", "Jefferson", and "Princeton".

27. **London Plane Tree –** *Plantanus occidentalis* "Bloodgood", "Columbia", "Liberty", and "Exclamation".

28. **Osage-Orange –** *Malclura pamifera* "White Shield" and "Wichita".

III. PERIPHERY/NATURAL AREA TREES

These trees require the least amount of maintenance because of their often remote and sheltered locations. The trees in these areas are managed not as individual trees, but rather as stands of trees linked to the associated plants and sites on which they reside. These trees can come in conflict with people when they occur along property lines,

adjacent to man-made structures or near gathering places. These trees generally produce some fruit and/or nuts, etc.

SMALL TREES & FLOWERING TREES (under 30' in height)

1. **Ohio buckeye –** *Aesculus glabra.*

2. **Red Buckeye –** *Aesculus pavia.*

3. ***Hophornbeam –** *Ostrya virginiana.*

4. **Pawpaw –** *Asimina triloba.*

5. **Hardy Rubbertree –** *Eucommia ulmoides.*

6. ***Sassafras –** *Sassafras albidum.*

7. **Flowering Crabapple –** *Malus spp.* "Centurion", "Harvest Gold", "Prairie Fire", "Profesor Sprenger", "Snowdrift", "Sugar Tyme", "Adams", "Callaway", "Indian Summer", "Robinson", and "Donald Wyman".

8. **Persian Parrotia –** *Parrotia persica* "Horzontalis", and "Vanessa".

9. ***Downey Serviceberry –** *Amelanchier arborea* "Autumn Brilliance", "Cumulus", "Princess Diana", and "Prince Charles".

10. **Serviceberry –** *Amelanchier x grandiflora* "Spring Flurry", "Autumn Sunset", "Snowcloud" and "Tradition".

11. **Goldenrain Tree –** *Koelreutria paniculata.*

12. **Lilac, Japanese Tree –** *Syringa reticulate* "Ivory Silk", "Regent Japanese" and "Summer Snow".

13. **American Witch Hazel –** *Hamamelis virginiana.*

14. **Sweetbay/Swamp Magnolia -** *M. virginiana.*

15. **Viburnum –** *prunifolium* "Black Haw".

16. **Viburnum –** rufidulum "Rusty Black Haw".

17. **Higan Cherry –** *Prunus Subhirtella* "Pendula Plena Rosea".

18. ***Eastern Red Cedar –** *Juniperus virginiana* "Canaertii".

MEDIUM - LARGE TREES (30' to over 60' in height)

1. ***American Sycamore –** *Platanus occidentalis* "Bloodgood", "Columbia" and "Liberty".

2. **Hickory –** *Carya laciniosa* "Shellbark".

3. ***Hickory –** *Carya ovate* "Shagbark".

4. ***Chestnut Oak –** Quercus michauxii "Swamp Chestnut Oak".

5. **Chestnut Oak –** *Quercus prinus* "Chestnut Oak".

6. ***Pecan –** *Carya illinoensis* **"**Hardy Giant", "Major" and "Colby".

7. **European Alder –** *Alnus glutinosa.*

8. ***Blackgum/Sour Gum/Tupelo –** *Nyssa sylvatica* "*Wildfire", "Green Gables", "Afterburner" and "Firestarter".

9. ***Kentucky Coffeetree –** *Cymnocladus dioicus* "Espresso" (Seedless).

10. ***Common Hackberry –** *Celtis occidentalis* "All Seasons Sugar" and "Prairie Pride".

11. ***Bur Oak –** *Quercus macrocarpa.*

12. ***White Oak –** *Quercus alba.*

13. ***Overcup Oak –** *Quercus lyrata.*

14. ***Post Oak –** *Quercus stellate.*

15. **English Oak –** *Quercus robur.*

16. **Swamp White Oak –** *Quercus. Bicolor.*

17. **Cherrybark Oak –** *Quercus falcate var. pagodifolia*

18. **Southern Red Oak –** *Quercus falcate.*

19. **Shingle Oak** – *Quercus imbricaria.*

20. **Water Oak –** *Quercus nigra.*

21. **Black Walnut –** *Juglans nigra.*

22. **Catalpa –** *Catalpa.*

23. **Osage-Orange –** *Malclura pamifera* "Denmark", "Derby", "K-2", "Smolan", "Triple-O", "What Cheer", and "Altamont".

24. **Silverbell –** *Halesia tetraptera.*

25. **Turkish Filbert –** *Corylus colurna.*

26. **Japanese Pagodatree -** *Sophora japonica.*

27. **Thornless Honeylocust –** *Gleditsia tricanthos var. inermis* "Imperial", "Shademaster", and "Skyline".

28. **American Hophornbeam –** *Ostrya virginiana.*

29. **Black Cherry –** *Prunus serotine.*

30. **Yoshino Cherry –** *Prunus x yesoensis.*

IV. TREES UNDESIRABLE FOR PLANTING IN THE CITY OF UNIVERSITY CITY

While many tree species are quite applicable and adaptable for most environments, the following variety of trees may not be appropriate for use within the City of University City. Primary reasons for discouraging the use of these undesirable tree species include:

- Root system.
- Soil type.
- Heat and/or cold tolerance.
- Drought tolerance.
- Weak branching habit, resulting in frequent release of fallen branches.
- Prone to damage by insects, diseases and nutrient deficiencies.
- Leaf scorch and mildew.
- Poor Transplantation.

CONIFERS

1. **Austrian Pine –** *Pinus nigra*

2. **Scotch Pine –** *Pinus sylvestris*

SMALL TREES & FLOWERING TREES (under 30' in height)

1. **Mimosa –** *Albizia julibrissin*

2. **Mountain Ash -** *Sorbus aucuparia*

3. **Russian Olive –** *Elaeagnus angustifolia*

4. **Callery Pear –** *Pyrus calleryana* "Bradford", "Aristocrat", "Capital", "Redspire" and "Cleveland Select".

5. **Apple –** *Malus.*

6. **Crabapple –** *Malus x hybrids.*

7. **Mulberry –** *Morus.*

8. **Cherry –** Plum – *Prunus.*

9. **Pear –** *Pyrus Calleryana.*

10. **Purple-leaf Plum –** *Prunus cerasifera* "Newport", and "Thundercloud".

MEDIUM TO LARGE TREES (30' to over 60' in height)

1. **European White Birch –** *Betula pendula.*

2. **Boxelder –** *Acer negundo.*

3. **Black Cherry –** *Prunus serotine.*

4. **Siberian Elm –** *Ulmus pumila.*

5. **Black Locust –** *Robinia pseudoacacia.*

6. ***Silver Maple –** *Acer saccharinum.*

7. **Red Maple -** *Acer rubrum* "Sunset".

8. **White Mulberry –** *Morus alba.*

9. **Red Mulberry –** *Morus rubra.*

10. **Osage-orange –** *Maclura pamifera* "Cannonball".

11. ***Persimmon –** *Diospyros virginiana.*

12. **Eastern Cottonwood Poplar –** *Populus deltoids.*

13. **Lombardy Poplar –** *Populus nigra* "Italica".

14. **Tree-of-Heaven –** *Ailanthus altissima.*

15. ***Green Ash –** *Fraxinus pennsylvanica.*

16. **White Ash –** *Fraxinus Americana* "Autumn Applause", "Autumn Purple", Champaign County", "Rosehill" and "Skyline".

17. **Black Ash –** *Fraxinus nigra.*

18. **Blue Ash –** *Fraxinus quadrangulata.*

19. **Pumpkin Ash –** *Fraxinus profunda.*

20. **Horsechestnut –** *Aecsculus.*

21. **Red Horse Chestnut –** *Aescukus carnea.*

22. **Washington Hawthorne –** *Crataegus phaenopyrum* "Winter King".

23. ***Downy Hawthorne –** *Crataegus mollis.*

24. **Green Hawthorne –** *Crataegus viridis.*

25. **Ginko –** *Ginko biloba* "Maidenhair Tree" (Female).

26. **Honeylocust –** *Gleditisia triacanthos.*

27. ***Sweet Gum –** *Liquidambar styraciflua.*

28. ***Poplar; Cottonwood –** *Populus.*

29. **Sawtooth Oak –** *Quercus acutissima.*

30. ***Willow –** *Salix.*

31. **Tuliptree –** *Liriodenddron tulipifera.*

Underlined Species = Plants of Merit
* = Trees native to Missouri