

APPENDIX L

***CITY STREET TREE SPECIES RECOMMENDATIONS***

The City of Oconomowoc lies within the USDA Hardiness Zone 5a. This means that plants thrive and perform well in cold hardiness zones 1 to 5a (-15 to -20<sup>0</sup> F). Street trees have been selected based upon hardiness to withstand urban conditions such as drought, salt tolerance, planting space, soil conditions, soil pH, insect and disease resistance, etc. Each planting site and conditions should first be evaluated by the City Forester before selecting the right tree in the right place.

The following is a list of recommended acceptable trees for medians, terrace areas and cut out areas along the street. There are many new hardy cultivars added yearly at the nurseries. Additional requested cultivars not on this list will need approval by the City Forester. Species selected is subjected to plant availability at the nursery. **Please note that Ash trees are not allowed to be planted due to emerald ash borer. Maple trees are also being limited from planting at this time because of high population numbers.**

***SMALL SIZED STREET TREES*** (30' Maximum Height)

Suitable terrace areas for the following species shall be 5' minimum to 7' maximum terrace width with 25' minimum spacing requirement. The smaller sized trees would also be acceptable for planting in wider terraces and under wires as well. Trees best suited for median boulevard areas are noted next to the species and should be used solely for that purpose.

| <b><u>SPECIES</u></b>                                       | <b><u>SCIENTIFIC NAME /CULTIVAR</u></b>             | <b><u>SIZE</u></b> | <b><u>GROWTH RATE &amp; HABITS</u></b>            |
|---|---|--------------------|---|
| <b>Downy Serviceberry</b><br>( <i>Spring dig only</i> )     | <i>Amelanchier x grandiflora</i>                    |                    |   |
|   | ‘Autumn Brilliance’                                 | 20x25              | Medium, white flowers, red fall color             |
|   | ‘Cole’s Select’                                     | 20x15              | Medium, white flowers, orange-red fall color      |
|   | ‘Princess Diana’                                    | 25x20              | Medium, white flowers, red/orange fall color      |
|   | ‘Robin Hill’  | 30x15              | Medium, white flowers, bright red fall color      |
| <b>Allegheny Serviceberry</b><br>( <i>Spring dig only</i> ) | <i>Amelanchier laevis</i>                           |                    |   |
|   | ‘Cumulus’   | 25x20              | Med., white flowers, orange-scarlet fall color    |
|   | ‘Lustre’  | 25x15              | Med., white flowers, orange/red/yellow fall color |
|   | ‘Snowcloud’   | 25x20              | Med., white flowers, coppery orange fall color    |
|   | ‘Spring Flurry’                                     | 35x20              | Med., white flowers, orange fall color, oval      |
| <b>Cockspur Thornless Hawthorn</b>                          | <i>Crataegus crusgalli var. inermis</i> (no thorns) |                    |   |
|   | ‘Cruzam’ (Crusader)                                 | 30x25              | Slow to medium, white flowers, red fall color     |
| <b>Winter King Hawthorn</b> ( <i>median trees</i> )         | <i>Crataegus viridus</i> (few thorns)               | 25x25              | Slow to medium, white flowers, scarlet fall color |

***SMALL SIZED STREET TREES*** (30' Maximum Height)

Suitable terrace areas for the following species shall be 5' minimum to 7' maximum terrace width with 25' minimum spacing requirement.

| <u>SPECIES</u>   | <u>SCIENTIFIC NAME/CULTIVAR</u>            | <u>SIZE</u>           | <u>GROWTH RATE &amp; HABITS</u>                    |
|--|--|-----------------------|--|
| <b>Amur Maackia</b>  | <i>Maackia amurensis</i>                   |                       |  |
|  | ‘Starburst’                                | 30x20                 | Slow, white flowers, vase shaped, yellow fall      |
|  | ‘Summertime’                               | 20x15                 | Slow, white flowers, upright rounded, yellow fall  |
| <b>Flowering Crabapple (<i>Malus spp.</i>)</b><br><b>White flowers w/red fruit</b> | Apple scab/Fire blight resistant varieties |                       |  |
|  | ‘Adirondack’                               | 20x12                 | Upright  |
|  | ‘Calocarpa’ (Zumi)                         | 20x20                 | Rounded, spreading, orange fall color              |
|  | ‘Donald Wyman’                             | 25x25                 | Broadly rounded                                    |
|  | ‘Guinzam’ (Guinevere)                      | 8x15                  | Rounded  |
|  | ‘Red Jewel’                                | 20x15                 | Upright, pyramidal                                 |
|  | ‘Sutyzam’ (Sugar Tyme)                     | 25x15                 | Upright, spreading, oval                           |
|  | ‘Select A’ (Firebird)                      | 8x12                  | Rounded, spreading                                 |
|  | ‘Tina’                                     | 5x8                   | Low, spreading                                     |
|  | <b>White flowers w/yellow/orange fruit</b> | ‘Cinzam’ (Cinderella) | 8x5  |
| ‘Excazam’ (Excalibur)  |  | 12x10                 | Upright, dense canopy                              |
| ‘Golden Raindrops’   |  | 25x25                 | Upright, vase shaped                               |
| ‘Hargozam’ (Harvest Gold)  |  | 25x25                 | Upright to rounded with age                        |
| ‘Lanzam’ (Lancelot)  |  | 10x8                  | Upright, oval                                      |
| ‘Ormiston Roy’   |  | 25x25                 | Broad, rounded                                     |
| ‘Professor Sprenger’   |  | 30x30                 | Upright, spreading, rounded                        |
| <b>Pink/red flowers w/purple/red fruit</b>   | ‘Camzam’ (Camelot)                         | 10x8                  | Rounded, fast growth, dark green burgunday         |
|  | ‘Canterzam’ (Canterbury)                   | 10x15                 | Rounded, compact, dense canopy                     |
|  | ‘Cardinal’                                 | 20x20                 | Broad, purple/red leaves                           |
|  | ‘Orange Crush’                             | 15x15                 | Bronze purplish green leaves                       |
|  | ‘Prairiefire’                              | 20x20                 | Rounded, irregular, red maroon leaves, orange fall |
|  | ‘Profusion’                                | 25x25                 | Upright, rounded, purple to bronze green leaves    |
|  | ‘Purple Prince’                            | 20x20                 | Upright, rounded, dark purple/bronze green leaves  |
|  | ‘Red Splendor’                             | 20x20                 | Upright, spreading, purple to green leaves         |
|  | ‘Royal Raindrops’                          | 20x15                 | Upright, spreading, purple leaves                  |

***SMALL SIZED STREET TREES*** (30' Maximum Height)

Suitable terrace areas for the following species shall be 5' minimum to 7' maximum terrace width with 25' minimum spacing requirement.

| <b><u>SPECIES</u></b>                 | <b><u>SCIENTIFIC NAME/CULTIVAR</u></b> | <b><u>SIZE</u></b> | <b><u>GROWTH RATE &amp; HABITS</u></b>  |
|---------------------------------------|--|--------------------|---|
| <b>Japanese Tree Lilac</b>            | <i>Syringa reticulata</i>              |                    | All flower every other year   |
|                                       | ‘Ivory Silk’                           | 25x15              | Medium growth, creamy white flowers in June   |
|                                       | ‘Elliot’ (Snowcap)                     | 20x15              | Pyramidal, compact, creamy white flowers  |
|                                       | ‘Summer Snow’                          | 20x25              | Rounded, creamy white flowers   |
|                                       | ‘Williamette’ (Ivory Pillar)           | 25x15              | Upright, narrow, pyramidal, creamy white flowers  |
| <b>China Snow Peking Lilac</b>        | <i>Syringa pekinensis</i> ‘Morton’     | 25x20              | Rounded, creamy white flowers, amber shiny bark   |
| <b>Amur or Manchurian Chokecherry</b> | <i>Prunus maackii</i>                  | 30x30              | Copper bark, white flowers, rounded, fast grower  |
| <b>Canada Red Chokecherry</b>         | <i>Prunus virginiana</i> ‘Canada Red’  | 25x20              | Fast growth, green maroon leaves, white flowers   |
| <b>Sargent Cherry</b>                 | <i>Prunus sargentii</i>                |                    | All have cinnamon colored bark and pink flowers   |
|                                       | ‘Columnaris’                           | 35x15              | Cinnamon bark, pink flowers, orange fall color  |
|                                       | ‘JFS-KW58’ (Pink Flair)                | 25x15              | Upright, narrow shape, orange fall color  |
|                                       | ‘Accolade’                             | 25x25              | Rounded shape, red fall color   |
| <b>Callery Pear</b>                   | <i>Pyrus calleryana</i>                |                    |   |
|                                       | ‘Autumn Blaze’                         | 30x30              | Fast growth, white flowers, rounded, red/purple   |
|                                       | ‘Cleveland Select’                     | 30x15              | Best of the pear, white flowers, fast grower, reddish purple fall color, pyramidal form |
| <b>Littleleaf Linden</b>              | ‘Halka’ (Summer Sprite)                | 20x10              | Slow growth, pyramidal form, yellow fall color  |

***MEDIUM SIZED STREET TREES*** (30' to 50' in height)

The medium sized trees listed are best suited for terrace areas 6' to 8'+ wide for adequate root space and should be spaced 35' to 50' apart.

| <b><u>SPECIES</u></b>                         | <b><u>SCIENTIFIC NAME/CULTIVAR</u></b>    | <b><u>SIZE</u></b> | <b><u>GROWTH &amp; HABITS</u></b>                  |
|---|---|--------------------|--|
| <b>Thornless Honeylocust</b>                  | <i>Gleditsia triacanthos var. inermis</i> |                    |  |
|   | ‘Harve’ (Northern Acclaim)                | 35x35              | Symmetrical, upright, yellow fall color            |
|   | ‘Impcole’ (Imperial)                      | 35x35              | Rounded, graceful branches, yellow fall color      |
|   | ‘Suncole’ (Sunburst)                      | 40x35              | Broad, irregular shape, yellow to green leaves     |
|   | ‘True Shade’                              | 40x35              | Broadly oval, fast grower, yellow fall color       |
|   | ‘Skycole’ (Skyline)                       | 45x35              | Upright, oval, golden yellow fall color            |
|   | ‘Perfection’                              | 50x35              | Slightly broader than Skyline but not as spreading |
| <b>Ironwood (American Hophornbeam)</b>        | <i>Ostrya virginiana</i>                  | 25x20              | Upright, pyramidal, yellow fall color              |
| <b>Ginkgo or Maidenhair Tree (males only)</b> | <i>Ginkgo biloba</i>                      |                    | Slow growers, fan shaped leaves, yellow fall color |
|   | ‘Autumn Gold’                             | 45x35              | Pyramidal, best cultivar of ginkgos, golden yellow |
|   | ‘Halka’                                   | 45x40              | Pyramidal to oval, bright yellow fall color        |
|   | ‘Magyar’                                  | 50x25              | Narrow, pyramidal, bright yellow                   |
|   | ‘Princeton Sentry’                        | 40x15              | Narrow, pyramidal, bright yellow                   |
|   | ‘Saratoga’                                | 40x30              | Pyramidal, symmetrical                             |
|   | ‘Shangri-La’                              | 40x30              | Uniform, compact crown, yellow fall, fast grower   |
| <b>Chanticleer Callery Pear</b>               | <i>Pyrus calleryana</i> ‘Glen’s Form’     | 40x15              | Upright, pyramidal, white flowers, red fall color  |
| <b>American Linden</b>                        | <i>Tilia americana</i>                    |                    |  |
|   | ‘Lincoln’                                 | 35x25              | Slender-upright compact form, light green leaves   |
|   | ‘Redmond’                                 | 50x35              | Uniform, pyramidal, white fragrant flowers, fast   |
| <b>Littleleaf Linden</b>                      | <i>Tilia cordata</i>                      |                    |  |
|   | ‘Baileyi’ (Shamrock)                      | 40x30              | Fragrant yellow flowers, pyramidal, open crown     |
|   | ‘Chancole’ (Chancellor)                   | 45x35              | Fragrant yellow flowers, pyramidal, compact, fast  |
|   | ‘Greenspire’                              | 45x35              | Broad, conical, fragrant yellow flowers, fast      |
| <b>Crimean Linden</b>                         | <i>Tilia x euchlora</i> ‘Crimean’         | 50x25              | Broad, pyramidal, glossy green leaves              |

## ***MEDIUM SIZED STREET TREES*** (30' to 50' in height)

The medium sized trees listed are best suited for terrace areas 6' to 8'+ wide for adequate root space and should be spaced 35' to 50' apart.

| <b><u>SPECIES</u></b>                                   | <b><u>SCIENTIFIC NAME/CULTIVAR</u></b>  | <b><u>SIZE</u></b> | <b><u>GROWTH &amp; HABITS</u></b>                  |
|---|---|--------------------|--|
| <b>Harvest Gold Linden</b>                              | <i>Tilia mongolica</i> 'Harvest Gold'   | 40x25              | Upright, rounded, golden yellow fall color, fast   |
| <b>Silver Linden</b>                                    | <i>Tilia tomentosa</i> 'Sterling'       | 50x30              | Broad pyramidal, silver undersides on leaves       |
| <b>Glenleven Linden</b>                                 | <i>Tilia x flavescens</i> 'Glenleven'   | 50x35              | Open, conical, fragrant yellow flower, yellow fall |
| <b>Elm Hybrids</b> ( <i>DED resistant</i> )             | <i>Ulmus spp.</i>                       |                    | All are typically fast growers                     |
|   | 'Discovery'                             | 45x35              | Upright, oval to vase shaped, arching, yellow fall |
|   | 'Frontier'                              | 50x35              | Upright, vase shaped, burgundy fall color          |
|   | 'Pioneer'                               | 50x50              | Broad pyramidal to rounded w/age, larger leaves    |
|   | 'Cathedral'                             | 50x50              | Broadly vase shaped, yellow fall color             |
|   | <i>Ulmus wilsonia</i> 'Prospector'      | 45x30              | Fast grower, vase shaped, dense                    |
| <b>Kentucky Coffeetree</b>                              | <i>Gymnocladus dioica</i><br>'Espresso' | 50x35              | Upright, oval, arching, lacy compound leaves       |
| <b>Hackberry</b> ( <i>Spring dig only</i> )             | <i>Celtis occidentalis</i>              |                    |  |
|   | 'Chicagoland'                           | 40x50              | Broad, pyramidal, yellow fall, pebbly gray bark    |
|   | 'Windy City'                            | 40x45              | Upright, spreading, yellow fall, pebbly gray bark  |
| <b>Turkish Filbert</b> ( <i>Spring dig only</i> )       | <i>Corylus colurna</i>                  | 50x30              | Broad, pyramidal, teardrop shaped                  |
| <b>Sunset Buckeye</b> ( <i>Spring dig only</i> )        | <i>Aesculus glabra</i> 'J.N. Select'    | 35x35              | Oval, few seeds, orange red fall color             |
| <b>Regal Prince Oak</b> ( <i>Spring dig only</i> )      | <i>Quercus x warei</i> 'Long'           | 50x25              | Columnar to upright oval, silver under leaves      |
| <b>Skymaster English Oak</b> ( <i>Spring dig only</i> ) | <i>Quercus robur</i> 'Pyramich'         | 50x25              | Narrow to pyramidal, strong central leader         |

## ***LARGE SIZED STREET TREES*** (50'+ in height)

The large sized trees are best suited for terrace areas 7'+ wide for adequate root space and should be spaced 50' apart.

| <b><u>SPECIES</u></b>                            | <b><u>SCIENTIFIC NAME/CULTIVAR</u></b>  | <b><u>SIZE</u></b>                        | <b><u>GROWTH &amp; HABITS</u></b>  |
|--|---|---|--|
| <b>Baldcypress</b> ( <i>tree boxes</i> )         | <i>Taxodium distichum</i><br>'Shawnee Brave'  | 75x18                                     | Narrow, pyramidal, likes wetter sites  |
| <b>Kentucky Coffeetree</b> ( <i>males only</i> ) | <i>Gymnocladus dioica</i>   | 60x60                                     | Upright, oval, lacy compound leaves  |
| <b>American Linden</b>                           | <i>Tilia americana</i><br>'Sentry'<br>'Wandell' (Legend)  | 60x35<br>60x40                            | Pyramidal, teardrop, white fragrant flowers<br>Pyramidal, excellent branching structure  |
| <b>Littleleaf Linden</b>                         | <i>Tilia cordata</i><br>'Norbert' (Prestige)  | 60x40                                     | Fast grower, fragrant yellow flowers, pyramidal  |
| <b>Silver Linden</b>                             | <i>Tilia tomentosa</i><br>'Green Mountain'  | 60x40                                     | Fast grower, silver undersides to leaves   |
| <b>American Elm</b> ( <i>DED resistant</i> )     | <i>Ulmus americana</i><br>'New Harmony'<br>'Princeton'<br>'Valley Forge'  | 70x60<br>70x50<br>80x60                   | Medium to fast growers, yellow fall color<br>Med to fast grower, broadly vase shaped<br>Large, leathery leaves<br>Classic vase shaped, upright arching, yellow fall  |
| <b>Elm Hybrids</b> ( <i>DED resistant</i> )      | <i>Ulmus japonica x</i><br>'New Horizon'<br>'Regal'   | 60x50<br>60x30                            | Upright, full crown, compact<br>Open growth habit, strong central leader   |
|  | <i>Ulmus spp.</i><br>'Morton' (Accolade)<br>'Morton Glossy' (Triumph)<br>'Morton Stalwart' (Commendation)<br>'Morton Red Tip' (Danada Charm)<br>'Patriot' | 70x50<br>55x45<br>60x50<br>70x60<br>70x60 | Vase shaped, arching, glossy leaves emerge red<br>Upright oval to vase shape, glossy leaves, arching<br>Upright oval, symmetrical, larger leaves<br>Vase shape, red tinged spring leaves to dark green<br>Stiffly upright, vase shaped |

***LARGE SIZED STREET TREES*** (50'+ in height)

The large sized trees are best suited for terrace areas 7'+ wide for adequate root space and should be spaced 50' apart.

| <b><u>SPECIES</u></b>                                  | <b><u>SCIENTIFIC NAME/CULTIVAR</u></b> | <b><u>SIZE</u></b> | <b><u>GROWTH &amp; HABITS</u></b>                                    |
|--|--|--------------------|--|
| <b>Swamp White Oak</b> ( <i>Spring dig only</i> )      | <i>Quercus bicolor</i>                 | 75x65              | Slow to medium growth, upright oval, 1" acorns                       |
| <b>Chinkapin Oak</b> ( <i>Spring dig only</i> )        | <i>Quercus muehlenbergii</i>           | 75x75              | Open, rounded, yellow orange brown fall color                        |
| <b>Ginkgo or Maidenhair Tree</b> ( <i>males only</i> ) | <i>Ginkgo biloba</i><br>'Golden Globe' | 60x40              | Slow growers, fan shaped leaves, yellow fall color<br>Broad, rounded |
| <b>Hackberry</b> ( <i>Spring dig only</i> )            | <i>Celtis occidentalis</i>             | 60x60              | Upright, vase shape, pebbly light gray bark                          |

APPENDIX M

***UNDESIRABLE CITY STREET TREES***

The following is a list of trees that are not acceptable for street tree planting within the City of Oconomowoc and the reasons why they are not acceptable. Anything not listed below or listed in the approved street tree list needs prior approval from the City Forester before planting.

**SPECIES**

**REASON UNDESIRABLE**

**ALL evergreen trees** (Pines, Fir, Spruces)

Vision obstruction problems

**Horsechestnut**

Weak wooded, messy fruit, leaf blotch, scorch

**Ohio Buckeye**

Messy fruit

**Hickory** (Shagbark and Bitternut)

Messy fruit

**Black Cherry**

Messy fruit

**Mulberries**

Messy fruit

**Common Apple and Pear**

Messy fruit

**Black Walnut and Butternut**

Messy fruit

**Catalpa**

Messy pods, disease problems, weak wooded

**Ginkgo** (females only)

Messy, smelly fruit

**Black Locust**

Weak attached branches, thorns, insect problems

**Red Maple**

Weak wooded, susceptible to storm damage, intolerant of alkaline soils

**Silver Maple**

Weak wood, sidewalk heaving, heavy seed, poor form, susceptible to storm damage

**Boxelder**

Weak wooded, insect problems

**Sugar Maple**

Sensitive to drought, air pollution and salt

**Sycamore**

Disease problems

**Birch** (all species)

Susceptible to insects/diseases, chlorosis, intolerant to disturbances, short lived

**Willow**

Weak wooded, insect and disease problems, sidewalk heaving

**Poplar, Aspen, Cottonwood**

Weak wooded, short lived, heavy seed crop, sidewalk heaving

**Ailanthus-Tree of Heaven**

Weak wooded

**Redbud**

Susceptible to winter injury

**Elm** (American and Siberian or Chinese, non resistant)

Dutch Elm Disease to non resistant trees, weak wooded

**Russian Olive**

Weak wooded, disease problems, poor form

**Red, White, Bur Oak**

Difficult to transplant, insect and disease problems, sidewalk heaving, litter problems at times, chlorosis

**Ash** (all species)

Emerald ash borer

**Mountainash**

Many disease problems