ELIGIBLE TREES FOR STRATHMORE

Deciduous Trees – Large Park Trees

Name & Hardiness Zone	Scientific Name & Reference	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought-Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations
American Elm (White Elm) 2	Ulmus americana CoC (see Note 4. Abbreviations & References)	25 & 15	High canopy, lower branches can be removed.	Medium to fast 100 years	Large shade tree, vase- shaped form, broad canopy. Adaptable, tolerant of pollution, salt, & dry or moist conditions.	Susceptible to elm scale & Dutch Elm Disease. A high maintenance tree. Monoculture risks spread of Dutch Elm disease. Boulevard tree.	Traditional boulevard tree but shallow roots may heave sidewalks in narrow boulevards. Unsuitable under overhead utility lines.
Balsam Poplar 1a	Populus balsamifera CoC	25 & 6	High canopy, lower branches can be removed.	Fast 60+ years	Oval canopy. Hardy, very adaptable to both dry conditions & some standing water.	Full sun, sandy to loamy well-drained soil. High maintenance tree. Fragrant but sticky resinous buds drop & may require maintenance. Resin from buds are difficult to remove from vehicles. Aggressive, shallow roots, avoid placing tree close to buildings.	Roots can heave sidewalks, pavement & create uneven ground. Avoid in boulevards & adjacent to parking lots. Unsuitable under overhead utility lines.
Brandon Elm (Patmore Elm) 2b	Ulmus americana 'Brandon' AAFRD	15 & 10	High canopy, lower branches can be removed.	Fast 80 years	Vase shaped form, smaller than American Elm. Very hardy & adaptable. Tolerant of pollution, salt, & dry or wet conditions.	Full sun. Susceptible to Dutch Elm disease. Avoid monoculture. May require pruning to develop good form. Boulevard tree.	Unsuitable under overhead utility lines.
Bur Oak (Burr Oak) 2b	Quercus macrocarpa CoC,	14+ & 7	High canopy, lower branches can be removed.	Slow 300 years	Round canopy, dense foliage. Hardy, drought resistant, Chinook tolerant (deep tap root) & moderately pollution resistant. "Low water tree" – CoCLUB.	Full sun, deep moist soils. Produces acorns, attracts birds & squirrels. A satisfactory shelterbelt variety (AAF). Boulevard tree.	Unsuitable under overhead utility lines. Deep tap root may be acceptable near shallow utilities.
Fallgold Black Ash 2b	Fraxinus nigra 'Fallgold' AAFRD	14 & 7.5	High - 2.1 Lower branches can be removed.	Medium 70 years	Upright form, adaptable to soil & moisture conditions. Some tolerance to pollution.	Full sunlight. Prefers moist soils & will tolerate some standing water. Low maintenance, no fruit. Susceptible to Cottony Ash Pysllid. See Note 5. Avoid using unless authorized.	Unsuitable under overhead utility lines.

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Laurel Leaf Willow 3a	Salix pentandra CoC, AAFRD	13 & 13	Low - 1.2 or less	Very fast 60 years	Generally, round & wide spreading canopy. Very hardy. Drought resistant according to some sources. Tolerates some standing water, intolerant of alkaline soils.	Full or partial sun. Susceptible to die back but few pest or disease issues. High maintenance tree, pruning required. Risk of dropping branches. Aggressive shallow roots. Do not plant near buildings. Unsatisfactory for shelterbelts in this region (AAF).	Shallow roots create issues for shallow utilities. Unsuitable under overhead utility lines.				
Manitoba Maple (Box Elder) 2a	Acer negundo CoC	15 & 12	Low – 1.2	Fast 50+ years	Canopy varies from round to oval form. Multi- stemmed trees are likely have oval form. Hardy. Tolerates dry or wet conditions, a variety of soils & is drought resistant. Moderately tolerant of salt. Shallow roots.	Wood is brittle, subject to snow & wind damage. Unsuitable where breaking branches risk property damage. Susceptible to aphids. Suitable for windbreaks, soil stabilization & site remediation. Unsatisfactory for shelterbelts in this region (AAF).	Shallow roots may create issues for shallow utilities. Unsuitable under overhead utility lines.				
Northern Gem Hybrid Ash 2b	Fraxinus nigra x mandshurica 'Golden Gem' MNL, ELN	12 & 12	Medium - 1.8 Lower branches can be removed.	Medium 70 years	Oval canopy, hardy, adaptable to moist or dry conditions, pollution & drought resistant.	Full sun, low maintenance. Susceptible to Cottony Ash Psyllid. See Note 5. Avoid using unless authorized.	Unsuitable under overhead utility lines.				
Northern Treasure Hybrid Ash 2b	Fraxinus nigra x mandshurica 'Northern Treasure' MNL, ELN	15 & 10	Medium – 2.1 Lower branches can be removed	Medium 70 years	Upright spreading oval canopy, adaptable to moist or dry conditions, pollution & drought tolerant.	Full sun, low maintenance. Good street tree. Susceptible to Cottony Ash Psyllid. See Note 5. Avoid using unless authorized.	Unsuitable under overhead utility lines.				
Northwest Poplar 2a	Populus x jackii 'Northwest' CoC	25 & 20	Medium to high Lower branches can be removed.	Fast 30 to 60 years	Oval canopy, very hardy, tolerant of dry conditions & some standing water. Drought resistant once established.	Full sun or partial shade. Requires generous growing space & watering to establish. Shallow, aggressive roots. Susceptible to wind damage. A satisfactory shelterbelt variety (AAF).	Roots risk heaving sidewalks, pavement & create issues with shallow underground services. Unsuitable under overhead utility lines.				

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Paper Birch (White Birch, Canoe Birch) 2a	Betula papyrifera CoC	18 & 11	Low - 0.9	Medium 15 to 50+ years	Oval canopy, white bark & shallow roots.	Full sun to partial shade, well-drained sandy or silty loam soils. Requires consistent moisture & wind protection. Susceptible to insects. Unsatisfactory for shelterbelts in this region (AAF).	Unsuitable under overhead utility lines.				
Prairie Spire Green Ash (Red Ash) 2b	Fraxinus pennsylvanica 'Rugby' (CoC: Franxinus pennsylvanica species)	15m height, width varies from 4 to 7.5 m according to sources.	Medium - 1.8 Lower branches can be removed.	Fast 70 years	Narrow pyramidal form becoming more elliptical with age. Hardy. Tolerates moist or dry conditions. Pollution, salt & drought resistant.	Full sun. Seedless. Green Ash recommended for shelterbelts in this region (AAF).	Unsuitable under overhead utility lines.				
Trembling Aspen (Quaking Aspen) 1a	Populus tremuloides CoC	15 & 9	Low - 1.5	Fast 50 years	Upright oval canopy, smooth white bark. Tolerates dry or moist conditions, & some standing water. Drought resistant. Intolerant of pollution.	Full sun. May require pruning; subject to suckering, insects & disease. Best suited for large park/ woodland setting.	Unsuitable under overhead utility lines.				
True North Linden (Basswood, American Linden) 2a	Tilia americana 'Duros' ELN, CoMH	15 & 5	Medium – 1.8 Lower branches can be removed	Medium 60 years	Narrow pyramidal/ upright oval canopy. Yellow flowers, dense foliage. Tolerates moist or dry conditions, somewhat pollution tolerant.	Full sun. Low maintenance. Boulevard tree.	Unsuitable under overhead utility lines.				
Coniferou											
Blue Colorado Spruce 2a	Picea pungens 'var. glauca' MNL	15 & 7.5	Low – at grade	Slow 80 years	Pyramidal form, dense blue green foliage. Colour is more reliable than Colorado Spruce. Tolerates moist or dry conditions, salt & pollution. Drought resistant. Intolerant of standing water.	Full sun, low maintenance Excellent windbreak. (AAF)	Unsuitable under overhead utility lines.				

Coniferou	Coniferous Trees – Large Park Trees										
Name & Hardiness Zone	Scientific Name	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations				
Colorado Spruce 2a	Picea pungens CoC, CoCLUB	20 & 7	Low – at grade	Medium 80 years	Pyramidal form, silvery blue foliage typical but can range from bright green to silvery blue. Drought resistant once established. Tolerates moist or dry conditions, pollution & salt. Intolerant of standing water. "Low water tree" – CoCLUB.	Full sun & acidic soil. Susceptible to spider mites, spruce gall aphid. A recommended shelterbelt variety (AAF).	Unsuitable under overhead utility lines.				
Jack Pine 1	Pinus banksiana CoCLUB SIU	15 & 11	Low – at grade Lower branches may be removed.	Slow 80 years	Pyramidal to round form. Form can be variable due to circumstances & location. Intolerant of pollution. Drought tolerant. "Low water tree" – CoCLUB.	Full sun. Prefers dry to moderately moist conditions. Requires sandy & well-drained soils. Generous growing space is recommended.	Unsuitable under overhead utility lines.				
Limber Pine 3	Pinus flexilis CoCLUB SIU	15 & 10	Low – at grade to 1.2m	Slow 100 years	Upright oval shape with bluish-green foliage. Intolerant of standing water. Moderately tolerant of pollution. Drought resistant.	Full sun to partial shade. Prefers dry to moderately moist conditions. Requires well-drained soils.	Unsuitable under overhead utility lines.				
Lodgepole Pine 3a	Pinus contorta 'subsp. latifolia' MNL, ELN	20+ & 7.5	Low – 1.5 Lower branches can be removed.	Medium 100 years	Narrow pyramidal form, open branches. Requires some moisture, adaptable to dry conditions. Drought & pollution resistant. Intolerant of standing water. "Low water tree" – CoCLUB.	Full sun. Low maintenance. Alberta's official tree.	Unsuitable under overhead utility lines.				
Norway Spruce (Norwegian Spruce) 3	Picea abies CoC	35+ & 10	Low – at grade	Medium to fast 100+ years	Pyramidal form, dense branches. Tolerates seasonal drought & pollution. Resistant to high winds (deep spreading roots).	Full to partial sun. Moist well-drained soils. Susceptible to gall aphids & mites. Requires irrigation – less drought tolerant than other varieties. Unsatisfactory for shelterbelts in this region (AAF).	Unsuitable under overhead utility lines.				

Coniferou	Coniferous Trees – Large Park Trees										
Name & Hardiness Zone	Scientific Name	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations				
Scots Pine 2b	Pinus sylvestris CoCYS, MNL	15+ & 11 Width varies depending on variety. (ACS)	Low – 1.5 Lower branches can be removed.	Medium 50 years	Form can vary depending on variety. Commonly pyramidal to round form. Pollution & drought resistant. Intolerant of standing water.	Full sun. Requires well-drained soil.	Unsuitable under overhead utility lines.				
Siberian Larch 1b	Larix sibirica CoC	15 & 6	Low – 0.3	Medium 70 years	Pyramidal form. Loses its needles in the fall. Not drought or pollution resistant.	Full sun to partial shade. Prefers moist, light & well- drained soils. A recommended shelterbelt variety (AAF).	Unsuitable under overhead utility lines.				
White Spruce 2	Picea glauca CoC	25 & 6	Low – at grade	Medium 70 years	Pyramidal form, bluish-green foliage, hardy & drought resistant.	Full sun, moist acidic soil. Unsatisfactory for shelterbelts in this region (AAF).	Unsuitable under overhead utility lines.				
Deciduous T	rees - Medium	Park Trees									
Dropmore Linden 2a	Tilia x flavescens 'Dropmore' CoC	12 & 7	Medium - 1.8 Lower branches can be removed.	Slow to Medium 70 years	Pyramidal form, dense foliage, fragrant flowers in summer. Tolerates moist & dry conditions. Drought & pollution resistant.	Full sun, well-drained soil. Low maintenance. Boulevard tree. Preferred Linden variety	Unsuitable under overhead utility lines.				
Greenspire Linden 3b	Tilia cordata 'Greenspire' ELN, CoMH	12 & 7	Medium - 1.8 Lower branches can be removed.	Medium 70+ years	Pyramidal form, dense foliage, fragrant flowers in early summer. Adaptable to moist or dry conditions. Drought & pollution resistant.	Full sun. Low maintenance. Boulevard tree. Monitor survivability - not recommended by AAFRD. Avoid using unless authorized	Unsuitable under overhead utility lines.				
Harvest Gold Mongolian Linden 3a	Tilia mongolica 'Harvest Gold' MNL, CoMH	12 & 9	Low - 1.2	Medium 70 years	Pyramidal form, dense foliage, fragrant flowers. Adaptable to moist or dry conditions. Moderately pollution resistant.	Full sun. Low maintenance. Boulevard tree. Monitor survivability - not recommended by AAFRD. Avoid using unless authorized.	Unsuitable under overhead utility lines.				

Deciduous T	Deciduous Trees - Medium Park Trees										
Name & Hardiness Zone	Scientific Name	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations				
Mancana Manchurian Ash 2b	Fraxinus mandshurica 'Mancana' (AAFRD: Manchurian Ash)	12 & 6	High - 2.1 Lower branches can be removed.	Medium. 70 years	Round canopy, dense foliage. Adaptable to moist or dry conditions. Drought & pollution tolerant.	Full sun. Low maintenance. Leaves open early making it susceptible to late spring frost. Susceptible to Cottony Ash Psyllid. See Note 5. Avoid using unless authorized.	Not suitable under overhead utility lines.				
Ohio Buckeye (Horse Chestnut) 2b	Aesculus glabra CoC	10 & 10	Low - 0.6	Medium 60 years	Round canopy, yellow flowers in spring. Tolerant of pollution. Requires consistent moisture.	Full sun or partial shade, moist well-drained soil. Fruit requires clean-up. All parts of this tree (i.e. leaves, bark & fruit) are highly toxic if ingested by humans or livestock (USDA-NRCS).	Unsuitable under overhead utility lines.				
Russian Mountain Ash 2b	Sorbus aucuparia 'Rossica' CoA, ELN	10 & 6	Low – 1.2 Lower branches can be removed.	Medium 50 years	Pyramidal to upright oval form. White flowers & reddish orange fruit clusters. Tolerates pollution & dry or moist conditions.	Full sun. Fruit consumed by birds. May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	Not suitable under overhead utility lines.				
Swiss Stone Pine (Arolla Pine) 3a	Pinus cembra ELN	10 & 4.5	Low – 0.9	Slow 120 years+	Columnar & compact form. Dense foliage. Tolerant of dry soils, pollution & drought.	Requires well-drained soils	Unsuitable under overhead utility lines.				
Ussurian Pear (Harbin Pear, Manchurian Pear)	Pyrus ussuriensis CoC	11 & 7.5	Low - 1.2	Medium to fast 70 years	Round/ elliptical canopy, dense flowers in spring, burgundy leaves in fall. Pollution tolerant. "Low water tree" – CoCLUB.	Full sun, consistent moisture. Fruit edible. Fruit may require periodic clean-up.	Unsuitable under overhead utility lines.				

Coniferous 1	Coniferous Trees – Medium & Small Park Trees										
Name & Hardiness Zone	Scientific Name	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations				
Black Hills Spruce 2b	Picea glauca 'Densata' ELN	12 & 6	Low – at grade	Slow 90 years	Slender pyramidal form, densely branched. Tolerant of pollution & dry or moist conditions. Drought resistant.	Full sun. Low maintenance.	Not suitable under overhead utility lines.				
Ponderosa Pine (Yellow Pine) 2a	Pinus ponderosa CoCLUB, AAFRD	15 & 5+	High – 2.1 Lower branches can be removed.	Medium 100 years	Pyramidal form. Tolerant of salt. Intolerant of pollution. Drought resistant. "Low water tree" – CoCLUB.	Full sun. Prefers dry to slightly moist conditions with well-drained soils. Not suitable for boulevards due to pollution intolerance.	Not suitable under overhead utility lines.				
Mountain Pine (Dwarf Mountain Pine, Mugo Pine, Swiss Mountain Pine) 2a	Pinus uncinata, or Pinus mugo subsp. 'uncinata' ELN, (CoCYS: pinus mugo)	'uncinata' 4 & 2.2, P. mugo 4 & 3.5, 'Big Tuna' 6 & 3.5	Low – at grade to 0.6	'uncinata' Medium 50 years. P. mugo & 'Big Tuna' Slow 70 years.	Upright multi-stemmed spreading form. Very hardy. Tolerant of drought, salt & somewhat tolerant of pollution. Pinus mugo "Low water shrub" – CoCLUB.	Full sun. Low maintenance.	May be suitable under overhead power lines. Confirm species, variety, etc. & nursery information.				
Deciduous	s Trees - Smal	I Park Trees									
American Mountain Ash (Rowan) 2a	Sorbus americana CoC, ELN	8 & 5	Low - 0.9	Slow to medium. 40 – 80 years.	Elliptical canopy, multi- stemmed. Four season accent tree. White flowers in spring, clusters of bright red berries lasting until winter. Orange & red fall foliage. Tolerant of pollution & moist or dry conditions. Intolerant of saline & waterlogged soils.	Full sun. Berries require clean-up	Suitable under overhead utility lines.				
Amur Cherry 2b	Prunus maakii CoA, ELN	8 & 6	Low – 0.9	Fast 30 years	Round canopy, white flowers in spring. Tolerates pollution. Intolerant of standing water.	Full sun, moist soils. Plant as solitary specimen or with generous spacing to avoid competition.	May be suitable under overhead utility lines.				

Deciduous	Deciduous Trees – Small Park Trees										
Name & Hardiness Zone	Scientific Name	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations				
Amur Maple (Ginnala) 3b	Acer ginnala CoCYS CoCLUB	6 & 6	Low – 1.2	Medium 60 years	Round or spreading oval shape. Red samaras (winged seed pairs) & bright red fall foliage. Tolerates moist & dry conditions, pollution & drought. "Low water tree" – CoCLUB.	Full sun to partial shade. Low maintenance.	May be suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.				
Crabapple 2-3 depending on variety	Malus CoC	Varies depending on variety	Low – 0.6 Lower branches can be removed.	Medium 50 years	Generally round to elliptical form, flowers in spring. Some varieties produce flowers & fruit.	Fruit bearing varieties can attract hornets. Not all varieties produce fruit. Fruitless varieties preferred. Dropped fruit may require clean-up. Varieties with a canopy width of 3 m or less may be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	May be suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.				
Ivory Pillar Japanese Tree Lilac 3b	Syringa reticulata 'Willamette' ELN (CoC: Syringa reticulata species)	6 & 4	Low – 1.5	Medium 40 years	Upright, multi-stemmed spreading canopy. Dense foliage, white flowers in spring. Tolerates pollution. Requires consistent moisture.	Full sun. Suitable for narrow boulevards. 'Ivory Silk' not recommended by AAFRD (see also CoC & CoA)	Suitable under overhead utility lines.				
Japanese Tree Lilac 3b	Syringa reticulata CoC	7 & 6 (varies according to sources)	Low – 1.5	Medium 40 years	Round canopy or upright spreading canopy depending on variety. Dense white flowers in spring. Tolerates pollution & requires consistent moisture.	Full sun. Suitable for narrow boulevards.	May be suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.				
Mayday (Asian, European or Common Bird Cherry) 3a	Prunus padus 'var. commutata' CoC, CoA CoCLUB	8 & 8	Low - 1.2 Lower branches can be pruned	Medium to fast 30 years	Oval canopy, early leaves & white blossoms. Pollution tolerant. Requires consistent moisture. Intolerant of standing water "Low water tree" – CoCLUB.	Full sun. Susceptible to Black Knot Fungus. May sucker. A satisfactory shelterbelt variety (AAF). May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	Unsuitable under overhead utility lines.				

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Midnight Schubert Chokecherry (Common Chokecherry) 2a	Prunus virginiana 'Midnight Schubert' ELN	6 & 5.5	Low - 1.2	Medium 40 years	Round canopy, white flowers in spring, dark purple leaves, black cherries. Requires consistent moisture & tolerates pollution. Intolerant of standing water.	Full sun. Susceptible to black knot fungus & tent caterpillars. Less suckering at base of truck than other varieties. High maintenance, may require pruning. Self-pollinating. May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	Suitable under overhead utility lines.			
Pincherry (Mary Liss) 3a	Prunus pennsylvanica CoCYS (var. melanocarpa – CoCLUB)	5 & 3.5	Low – 0.6	Medium 30 years	Round to elliptical shape. White flowers, red fruit. Requires consistent moisture & tolerates pollution. Intolerant of standing water. Var. melanocarpa is identified as a "Low water tree"- CoCLUB.	Full sun. Fruit commonly consumed by birds. May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	May be suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			
Pyramidal Mountain Ash (Rowan) 3a	Sorbus aucuparia 'Fastigata' CoA, ELN	6 & 2.4	Low – 0.9	Medium 40 years	Narrow, columnar canopy. Clusters of white flowers in spring, orange berries in summer to winter. Tolerates pollution & dry or moist conditions.	Full sun. Suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			
Rosthern Columnar Siberian Crabapple 2b	Malus baccata 'Columnaris' ELN, (CoC: Malus species)	5.5 & 2	Low – 0.9	Medium 50 years	Narrow, columnar canopy. Clusters of white flowers in spring. Tolerates pollution, requires consistent moisture	Full sun. Fruit requires clean- up. See comments for Crabapple.	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			
Schubert Chokecherry 2a	Prunus virginiana 'Schubert' CoC, ELN	8 & 5	Low - 1.2	Medium 40 years	Round canopy, white flowers in spring, dark purple leaves, black cherries. Shade & pollution tolerant. Drought resistant. Intolerant of standing water.	Full sun for fruit production. Susceptible to black knot fungus, tent caterpillars & prone to suckering at base. High maintenance. May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	Suitable under overhead utility lines.			

Deciduous	Deciduous Trees - Small Park Trees									
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Spur Schubert Chokecherry (Common Chokecherry) 3a	Prunus virginiana 'Spur' MNL	5.5 & 4	Low - 1.2	Medium 40 years	Oval canopy, white flowers in spring, dark purple leaves, black cherries. Pollution tolerant. Intolerant of standing water	Full sun. High maintenance. Self-pollinating. May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA) Prunus virginiana L. is a satisfactory shelterbelt variety (AAF) but leaves are toxic to sheep & cattle especially after frost due to hydrocyanic content	Suitable under overhead utility lines.			
Spring Snow Flowering Crabapple (Rosybloom) 3a	Malus 'Spring Snow' ELN (CoC: Malus species)	7.5 & 4.6	Low - 1.2 Lower branches can be removed.	Medium 40 years	Oval upright form. Abundant white flowers in spring. Tolerant of pollution. Requires consistent moisture.	Full sun, moist conditions. Fruitless but requires maintenance.	May be suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			
Snowbird Hawthorn 3a	Crataegus x mordenensis 'Snowbird' ELG (CoC, CoCLUB: Hawthorn species)	5.5 & 4	Low - 1.2 Lower branches can be removed.	Medium 40 years	Round to vase shaped canopy, dense white flowers in spring. Tolerant of dry or moist conditions & moderately tolerant of pollution. Intolerant of standing water. "Low water shrub" – CoCLUB.	Full sun to partial shade. Thorns may be hazardous to children. May be suitable for boulevards & medians with a width of at least 2.5 m (CoA)	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			
Toba Hawthorn 3b	Crataegus x mordenensis 'Toba' ELN (CoC, CoC LUB: Hawthorn species)	5.5 & 4	Low - 1.2 Lower branches can be removed.	Medium 40 years	Vase shaped form pink or white flowers. Red fruit. Hardiest variety. Tolerant of dry or moist conditions & moderately tolerant of pollution. Intolerant of standing water. "Low water shrub" – CoCLUB.	Full sun to partial shade. Thorns may be hazardous to children. May be suitable for boulevards & medians with a width of at least 2.5 m. (CoA)	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			
Thunderchild Flowering Crabapple 2b	Malus 'Thunderchild' ELN, AFRD, (CoC: Malus species)	6 & 4	Low - 0.9	Medium 50 years	Upright spreading form. Lavender flowers in spring, purple foliage. Requires consistent moisture. Tolerates pollution.	Full sun. Fruit requires clean- up. See comments for Crabapple.	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information.			

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Wayfaring Tree 'Mohican' 3a	Viburnum lantana 'Mohican' ELN (CoCYS & CoCLUB Viburnum lantana species)	3.5 & 2.5	Low – at grade	Medium 40 years	Round form, multi-stemmed shrub, white flowers, fruit that changes from pink to red to black. Requires consistent moisture. Tolerant of pollution & soil type. "Low water shrub" – CoCLUB.	Full sun to partial shade. Low maintenance. Suitable for mass plantings.	Suitable under overhead utility lines.			
Trees for I	Narrow Space	s								
Big River Flowering Crabapple (Rosybloom) 3a	Malus 'Big River' ELN, (CoC: Malus species)	5 & 3	Low – 1.2	Medium 50 years	Narrow upright form. Pink flowers & red fruit. Pollution tolerant. Requires continuous moisture.	Full sun to partial shade & well-drained soil. Moisture requirements & fruit limit its application in narrow spaces. Fruit requires clean-up. See comments for Crabapple.	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information			
Bristlecone Pine (Hickory Pine) 2a	Pinus aristata CoCLUB, ELN	7 & 3	Low - 0.3	Slow 300 years	Upright spreading from. Tolerates dry or moist conditions. Intolerant of pollution. Drought resistant. "Low water tree" – CoCLUB.	Full sun. Requires well-drained soil. Not a suitable boulevard tree due to form & pollution intolerance.	May be suitable under overhead utility lines.			
Columnar Blue Colorado Spruce 2a	Picea pungens 'Fastigiata' CoC	6 & 2.5	Low - 0.6	Slow 90 years	Narrow pyramidal form, with upward reaching branches. Bluish-green foliage. Pollution & salt tolerant. Drought resistant.	Full sun, tolerates a range of soils	Unsuitable under overhead utility lines.			
Columnar Scots Pine 3b	Pinus sylvestris "Fastigiata' MNL (CoCYS – Pinus sylvestris species)	6 & 2	Low – 0.9	Fast 80 years	Narrow columnar form with upward reaching branches. Pollution tolerant & drought resistant. Intolerant of standing water.	Full sun, requires well-drained soil.	Unsuitable under overhead utility lines.			

Trees for I	Trees for Narrow Spaces										
Name & Hardiness Zone	Scientific Name	Height & Width at Maturity (m)	Canopy Height from Grade (m)	Growth Rate & Lifespan	Characteristics (Drought Resistance as Noted)	Ideal Growing Conditions, Issues & Use	Utility Considerations				
Emerald Spire Flowering Crabapple (Rosybloom) 2a	Malus 'Emerald Spire' ELN, (CoC - Malus species)	4 & 2	Low – 0.3	Medium 50 years	Narrow columnar form. Pink or white flowers, green fruit. Pollution tolerant. Requires consistent moisture.	Full sun. Moisture requirements & fruit limit its application in narrow spaces. Fruit requires clean-up. See comments for Crabapple.	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information				
Flowering Plum (Princess Kay Plum, Princess Kay Canadian Plum)) 3a	Prunus nigra 'Princess Kay' CoC, ELN	4 & 2.5	Low - 0.9	Medium 30 years	Upright spreading form. Dramatic white flowers with no or sparse fruit. Requires consistent moisture. Tolerates pollution. Intolerant of standing water.	Full sun, consistent moisture, no standing water	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information				
Purple Spire Columnar Crabapple (Rosybloom) 3a	Malus 'Jefspire' ELN, (CoC - Malus species)	7.5 & 2.5	Low – 0.3	Medium, 50 years	Narrow columnar upright form. Pink flowers & purple fruit. Pollution tolerant. Requires continuous moisture.	Full sun. Moisture requirements & fruit limit its application in narrow spaces. Fruit requires clean-up. See comments for Crabapple.	Suitable under overhead utility lines. Confirm species, variety, etc. & nursery information				
Swedish Columnar Aspen 2a	Populus tremula 'Erecta' CoC	15 & 2	Low - 1.5	Fast, 50 years	Tall, spire-like form. Drought resistant & somewhat tolerant of pollution.	Fun sun, well-drained soil with consistent moisture. Susceptible to Bronze Leaf disease. Intersperse with other trees to reduce the risk of spreading this disease.	Narrow canopy. May be suitable adjacent to overhead utility lines.				
Wayfaring Tree 'Mohican' 3a	Viburnum lantana 'Mohican' ELN (CoCYS: Viburnum lantana species)	3.5 & 2.5	Low – at grade	Medium 40 years	Round form, multi-stemmed shrub, white flowers, fruit that changes from pink to red to black. Requires consistent moisture. Tolerant of pollution & soil type.	Full sun to partial shade. Low maintenance. Suitable for mass plantings.	Suitable under overhead utility lines.				

Trees for Boulevards, Medians and Walkways - Summary		
Name	Characteristics	Summary Comments
American Elm	Large boulevard tree (25m high, 15 m wide).	Requires adequate space. Avoid monoculture. Tolerates pollution, salt & dry or moist conditions. High canopy, lower branches can be removed.
Brandon Elm	Large boulevard tree but smaller than American Elm (15m high, 10m wide)	Requires adequate space. Avoid monoculture. Tolerates pollution, salt & dry or wet conditions. High canopy, lower branches can be removed.
Bur Oak	Large boulevard tree (14+ m high, 10m wide)	Requires adequate space. Hardy, drought resistant & Chinook tolerant. High canopy, lower branches can be removed.
Crabapple (fruitless varieties)	Small trees with low canopies. Height and width varies depending on variety.	Varieties with a canopy width of 3m or less may be suitable in boulevards or medians with a width of at least 3m. Lower branches require removal to allow pedestrian traffic & visibility of pedestrians and vehicular traffic.
Dropmore Linden	Medium boulevard tree (12+ m high, 7m wide)	Comparatively narrow canopy. Tolerates moist or dry conditions. Drought and pollution resistant. Medium canopy, lower branches can be pruned. This is the preferred Linden variety.
Hawthorn (Toba or Snowbird)	Small boulevard tree (5.5m high, 4 m wide	Toba variety is the hardiest Hawthorn variety. Tolerant of moist or dry conditions & moderately pollution tolerant. Low canopy may require pruning but thorns risk injury.
Ivory Pillar Japanese Tree Lilac	Small tree (6m high, 4m wide)	Walkway tree for narrow spaces. Tolerates pollution. Requires consistent moisture. See also Japanese Tree Lilac.
Pincherry	Small tree (5m high, 4m wide)	Suitable for median & boulevards with a width of at least 2.5m. Fruit typically consumed by birds. Requires consistent moisture.
Pyramidal Mountain Ash	Small tree with narrow canopy (6m height, 2.4m wide)	Suitable for median & boulevards with a width of at least 2.5m. Tolerates pollution & dry or moist conditions.
Russian Mountain Ash	Medium boulevard tree (10m high, 6m wide)	Suitable for median & boulevards with a width of at least 2.5m. Tolerates pollution & dry or moist conditions.
Schubert Chokecherry	Small boulevard tree (height varies from 5.5 to 8m & 4 to 5.5m wide depending on variety.	Suitable for medians, boulevards & walkways with a width of at least 2.5 m. See Midnight Schubert Chokecherry, Spur Schubert Chokecherry & Schubert Chokecherry. Low canopy requires maintenance.
True North Linden	Large boulevard tree (15+ m high, 6m wide)	Comparatively narrow canopy. Tolerates moist or dry conditions, moderately pollution resistant. Medium canopy, lower branches can be pruned. See also Greenspire Linden & Harvest Gold Mongolian Linden.

Not Recommended:

1. Russian Olive (Oleaster), Elaeagnus angustifolia, 3a. This tree has a deep taproot and lateral root system which makes it very hardy, drought resistant and difficult to eradicate. It is identified as an invasive species by the Alberta Invasive Species Council but it is not regulated at this time. Seeds are spread by birds. This tree is controversial since it may not be invasive in this region. It may be used with the permission of Infrastructure and Development Services Department.

Notes:

- 1. Identifying a specific tree that may be suitable in a particular situation requires sufficient information recognizing that there are about 140 varieties of Colorado spruce ranging from small shrubs and dwarf trees to large trees with narrow to large spreading canopies. Understanding how the botanical or scientific name for a tree is determined together with its meaning helps provide essential information on a specific trees. In most cases the scientific name is based on 3 parts. The first identifies the genus, the second the species and the third the trinomial. The latter may identify the cultivar (in single quotes), the variety (var.), the subspecies (subsp. or ssp.), the form (f.) or the hybrid (x). In the case of Columnar Blue Colorado Spruce, "Picea" denotes the genus (spruce), "pungens" denotes the species (Colorado spruce) and "Fastigiata" denotes the trinomial. Fastigiata typically describes a columnar tree with a narrow spread and upright branches. (American Conifer Society).
- 2. Where noted in column 4, lower branches may be trimmed to allow pedestrian traffic, avoid corner visibility issues at intersections or enable the visibility of pedestrians and vehicles at or near driveways and crosswalks.
- 3. Pollution tolerant means tolerant to urban pollution in column 6.
- 4. Abbreviations and References
 - (a) ACS American Conifer Society
 - (b) AAF Alberta Agriculture & Forestry, Shelterbelt Varieties for Alberta
 - (c) AAFRD Alberta Agriculture Food & Rural Development (currently Alberta Agriculture & Forestry) Regional Woody Plan Project 2005,

Crop Diversification Center South, Brooks AB. Pamphlet No. 2006-3

- (d) CoA City of Airdrie, Standard Landscape Guidelines and Specifications, 2014, Appendix "F"
- (e) CoC City of Calgary, Parks, Top Tree Species for Calgary
- (f) CoCYS City of Calgary, Environment, Water Conservation, YardSmart Trees and Shrubs
- (g) CoCLUB City of Calgary Land Use Bylaw No. 1P2007 (as of October 12, 2017) Part 6 Division 1 General Rules
- (f) CoMH City of Medicine Hat, Preferred Tree Species List 2016
- (g) ELN Eagle Lake Nurseries, eaglelakenurseries.com (plant search)
- (h) MNL Millcreek Nursery, millcreeknurery.ca (plant search)
- (i) SIU Spruce It Up Garden Centre, spruceitupgardencentre.com
- (j) The Gymnosperm Data Base, www.conifers.org
- (k) USDA-NRCS United States Department of Agriculture, Natural Resources Conservation Service.
- 5. Cottony Ash Psysllid or Psyllopis discrepans (plant lice). This insect introduced recently affects Fallgold Black Ash (*Fraxinus nigra 'Fallgold'*), Manchurian Ash and the cultivar "Mancana" (*Fraxinus manshurica 'Mancana'*), and hybrids of Black Ash and Manchurian Ash, namely Northern Gem Hybrid Ash (*Fraxinus 'Golden Gem'*) and Northern Treasure Hybrid Ash (*Fraxinus 'Northern Treasure'*). Generally these trees are desirable in this region but the insect requires management. These trees should not be planted at this time without permission from the Infrastructure and Development Services Department. Green Ash and Mountain Ash are not affected.