



Guide For Landscaping

Administrative Policy No. 1995-3

E-1: Guide for Protecting Existing Trees. LSMC 14.76.120 provides for the retention and protection of large trees when land is developed. To better ensure the survival of existing trees, the developer should heed the following guidelines (in addition to the requirements of LSMC 14.76.120):

- (1) Protect trees with fencing and armoring during the entire construction period. The fence should enclose an area 10 feet square with the tree at the center.
- (2) Avoid compaction of the soil around existing trees due to heavy equipment. Do not pile dirt or other materials beneath the crown of the tree.
- (3) Keep fires or other sources of extreme heat well clear of existing trees.
- (4) Repair damaged roots and branches immediately. Exposed roots should be covered with topsoil. Severed limbs and roots should be painted. Whenever roots are destroyed, a proportionate number of branches must be pruned so the tree doesn't transpire more water than it takes in. Injured trees must be thoroughly watered during the ensuing growing year.
- (5) Prune all existing trees that will be surrounded by paving to prevent dehydration.

E-2: Standards for Street and Parking Lot Trees. Trees planted in compliance with the requirements of Sections 14.76.110 (Required Trees Along Dedicated Streets) and 14.76.130 (Shade Trees in Parking Areas) shall have most or all of the following qualities. The trees recommended in Section E-10 represent the best combinations of these characteristics.

Hardiness	Resistance to Extreme Temperatures
	Resistance to Drought
	Resistance to Storm Damage
	Resistance to Air Pollution
	Ability to Survive Physical Damage from Human Activity
Life Cycle	Moderate to rapid rate of growth.
	Long Life.
Foliage and Branching	Tendency to branch high above the ground.
	Wide spreading habit.
	Relatively dense foliage for maximum shading.

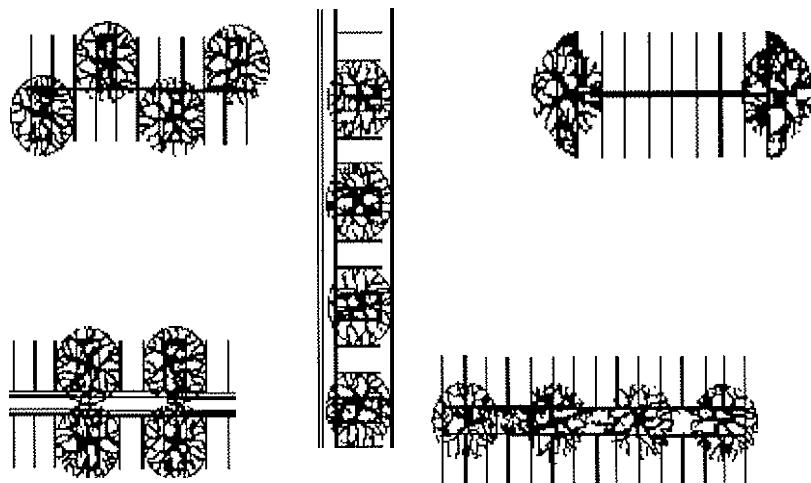
Maintenance	Resistance to pests.
	Resistance to plant diseases.
	Little or no pruning requirements.
	No significant litter problems.

E-3: Formula for Calculating 20 percent Shading of Vehicle Accommodation Areas. The following is an elementary formula for determining the number of shade trees required in and around paved parking lots in order to satisfy the shading requirements of LSMC 14.76.130 (Shade Trees in Parking Areas presumptively).

- 1 Including parking spaces, driveways, loading areas, sidewalks, and other circulation areas and not including building areas or any area which will remain completely undeveloped, calculate the square footage of the vehicle accommodation area (in square feet).
- 2 Multiply the area arrived at in step one by 0.20 (20%) to determine the area of shading required.
- 3 Divide the area of shading arrived at in step two by 707* s.f. to determine the number of trees that are required within the vehicle accommodation area.

*Trees planted within the vehicle accommodation area are credited with shading 707 square feet (based on a crown radius of 15 feet.) New or existing trees on the parking lot's perimeter are credited for having only half a crown over the vehicle accommodation area (i.e., 354 square feet). Generally, all trees planted in compliance with the screening requirements of Chapter 14.76, Part I, and the street tree requirements of LSMC 14.76.110 will be considered perimeter trees. When smaller trees such as Dogwoods are planted, the credited shading area will be adjusted downward to 314 square feet for interior trees and 157 square feet for perimeter trees. (Based on crown radius of 10 feet.)

E-4: Typical Parking Lot Planting Islands.



E-5: Guide for Planting Trees. The trees recommended in Section E-10 have minimal maintenance requirements. However, all trees must receive a certain degree of care, especially during and immediately after planting. To protect an investment in new trees, the developer should ensure that the following guidelines are followed when planting:

- (1) The best times for planting are early spring and early fall. Trees planted in the summer run the risk of dehydration.
- (2) Plant all trees at least 32 feet from the end of head-in parking spaces to prevent damage from car overhangs.
- (3) Dig the tree pit at least one foot wider than the root ball and at least six inches deeper than the ball's vertical dimension.
- (4) Especially in areas where construction activity has compacted the soil, the bottom of the pit should be scarified or loosened with a pickax or shovel.
- (5) After the pit is dug, observe subsurface drainage conditions. Where poor drainage exists, the tree pit should be dug at least an additional 12 inches and the bottom should be filled with coarse gravel.
- (6) Root barriers are required to be installed around all street trees within planter strips or within three feet of any concrete or asphalt.
- (7) Backfill should include a proper mix of soil, peat moss, and nutrients. All roots must be completely covered. Backfill should be thoroughly watered as it is placed around the roots.
- (8) Immediately after it is planted, the tree should be supported with stakes and guy wires to hold it firmly into place as its root system begins to develop. Staked trees will become stronger more quickly. Remove stakes and ties after one year.
- (9) Spread at least three inches of mulch over the entire excavation in order to retain moisture and keep down weeds. An additional three-inch saucer of mulch should be provided to form a basin around the trunk of the tree. This saucer helps catch and retain moisture.
- (10) The lower trunks of new trees should be wrapped with burlap or paper to prevent evaporation and sun scald. The wrapping should remain on the tree for at least one year.
- (11) Conscientious post planting care, especially watering, pruning, and fertilizing, is a must for street and parking lot trees. Branches of new trees may be reduced by as much as a third to prevent excessive evaporation.

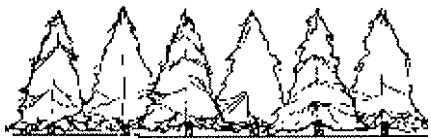
E-6: Typical Opaque Screens.



Small Trees planted 30' on center with a 6' high evergreen screening shrubbery planted 4' on center.



Large trees planted 40' on center with 6' high solid wood fence.



Tall evergreen trees, staggered, with branches touching the ground.

E-7: Typical Semi-Opaque Screens.



Small trees planted 30' on center, 3' high stone wall.

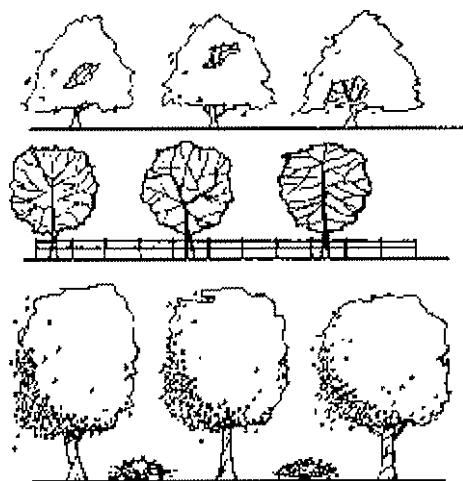


Small trees planted 10' on center on top of a berm.



Large trees planted 40' on center, with three-foot-high hedge shrubbery planted 3' on center

E-8:Typical Broken Screens.



Small trees planted 30' on center.

Small trees planted 30' on center with a split rail fence.

Large trees planted 40' on center with assorted shrubbery.

E-9: Guide for Planting Shrubs. Shrubs planted for screening purposes should be given a proper culture and sufficient room in which to grow. Many of the guidelines for tree planting listed in Section E-5 also apply to shrubs. However, because specific requirements vary considerably between shrub types, this appendix does not attempt to generalize the needs of all shrubs. For detailed planting information on individual species, refer to one or more reliable reference sources on shrubs.

E-10: Table of Recommended Trees and Shrubs. The following table indicates plantings that will meet the screening and shading requirements of Chapter 14.76 of the land-use code. The table is not comprehensive and is intended merely to suggest the types of flora that would be appropriate for screening and shading purposes. Plants were selected for inclusion on these lists according to four principal criteria: (i) general suitability for the climate and soil conditions of this area, (ii) ease of maintenance, (iii) tolerance of city conditions, and (iv) availability from area nurseries. When selecting new plantings for a particular site, a developer should first consider the types of plants that are thriving on or near that site. However, if an introduced species has proven highly effective for screening or shading in this area, it too may be a proper selection.

Table of Recommended Trees and Shrubs

		Small Trees for Partial Screening	Large Trees for Evergreen Screening	Small Shrubs for Evergreen Screening	Large Shrubs for Evergreen Screening	<u>Assorted</u> Shrubs for Broken Screening	Large Trees For Shading or Screening (no utility lines)	Small Trees For Shading or Screening (overhead utility lines)
Botanical Name	Common Name							
	Callery Pear	X						
	Fortune Tea Olive				X			
<i>Abelia grandiflora</i>	Glossy Abelia			X				
<i>Acer campestre</i>	Hedge Maple							X
<i>Acer ginnala</i>	Amur Maple							X
<i>Acer grisueum</i>	Paperbark Maple							X
<i>Acer nigrum</i> "Greencolumn" ¹¹	Greencolumn Maple						X	
<i>Acer Platanoides</i> 'Columnnare' 'Compacta' 'Crimson Sentry'	Columnar Maple Compact Maple Compact Crimson King Maple						X	X
<i>Acer platanoides</i> 'Globosum'	Globe Norway Maple							X
<i>Acer</i> <i>platampodes</i> 'Cleveland', 'Deborah', 'Schwedli', 'Superform'	Norway Maple						X	
<i>Acer</i> <i>pseudoplatanus</i>	Sycamore Maple						X	
<i>Acer rubrum</i>	Red Maple						X	
<i>Acer rubrum</i> 'Bowhall', 'Scarlet Sentinel ', 'Karpic', 'Doric'	Upright Red Maples						X	
<i>Acer saccharum</i> 'Legacy'	Legacy Sugar Maple						X	
<i>Acer truncatum</i>	Shantung Maple							X
<i>Acer truncatum</i> X <i>A. platanoides</i> 'Warrenred'	Pacific Sunset Maple							X
<i>Aesculus</i> <i>hippocastanum</i> 'Baumanii'	Bauman Horsechestnut						X	
<i>Aesculus x carnea</i> 'Briotii'	Red Horsechestnut						X	
<i>Aorbus aria</i>	Whitebeam						X	

Botanical Name	Common Name	Small Trees For Partial Screening	Large Trees for Evergreen Screening	Small Shrubs for Evergreen Screening	Large Shrubs for Evergreen Screening	Assorted Shrubs for Broken Screening	Large Trees for Shading or Screening (no utility lines)	Small Trees for Shading <u>or</u> Screening (overhead utility lines)
<i>Bambusa multiplex</i>	Hedge Bamboo				X			
<i>Berberis julianae</i>	Wintergreen Barberry			X				
<i>Berberis thunbergii</i>	Japanese Barberry					X		
<i>Berberis verruculosa</i>	Warty Barberry			X				
<i>Betula jacquemontii</i>	Jacquemontii Birch						X	
<i>Betula nigra</i>	River Birch	X						
<i>Calocedrus decurrens</i>	Incense Cedar		X					
<i>Carpinus betulus 'Fastigiata'</i>	Pyramidal European Hornbeam						X	
<i>Carpinus betulus 'Globosum'</i>	Globe European Hornbeam							X
<i>Carpinus carolinia</i>	American Hornbeam	X						
<i>Cedrus deodara</i>	Deodar Cedar		X					
<i>Cercidiphyllum japonicum</i>	Katsura						X	
<i>Cercis canadensis</i>	Eastern Redbud	X						
<i>Chioanthus virginicus</i>	Fringetree					X		
<i>Cornus florida</i>	Flowering Dogwood	X						
<i>Cornus kousa</i>	Kousa Dogwood							X
<i>Corylus colurna</i>	Turkish Filbert						X	
<i>Crataegus crus-galli 'Inermis'</i>	Thornless Cockspur Hawthorn							X
<i>Crataegus phaenopyrum</i>	Washington Hawthorn							X
<i>Crataegus x lavallei</i>	Lavalle Hawthorn							X
<i>Elaeagnus angustifolia</i>	Russian Olive	X						

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							Screening	Broken Screening
<i>Elaengus pungens</i>	Thorny Elaengus				X			
<i>Fagus sylvatica</i>	European Beech						X	
<i>Fagus sylvatica</i> 'Dawyckii'	Pyramidal Beech						X	
<i>Forsythia</i> <i>intermedia</i> , F. <i>suspensa</i> , F. <i>viridissima</i>	Forsythia					X		
<i>Fraxinus</i> <i>americana</i> 'Autum Purple', Autumn Applause', Champaign Country', 'Rose Hill'	American Ash						X	
<i>Fraxinus ornus</i>	Flowering Ash						X	
<i>Fraxinus oxycarpa</i> 'Raywood'	Raywood Ash						X	
<i>Fraxinus</i> <i>pennsylvanica</i> 'Patmore', 'Summit', Urbanite'	Green Ash						X	
<i>Ginkgo biloba</i>	Maidenhair Tree						X	
<i>Ginkgo biloba</i> 'Princeton Sentry'	Princeton Sentry Ginkgo						X	
<i>Gleditisia</i> <i>triacanthos</i>	Honeylocust						X	
<i>Halesia monticola</i>	Mountain Silverbell	X						
<i>Hamamelis</i> <i>intermedia</i>	Witch Hazel					X		
<i>Hamamelis</i> <i>virginiana</i>	Common Witch Hazel					X		
<i>Ilex cornuta</i> 'Burfordii'	Buford Holly				X			
<i>Ilex crenata</i>	Japanese Holly (var. varieties)			X				

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							Evergreen Screening	
<i>Ilex Opaca</i>	American Holly	X						
<i>Ilex</i> spp. (dwarf varieties)	various dwarf Hollys			X				
<i>Ilex vomitoria</i>	Yaupon Holly				X			
<i>Juniperus chinensis</i> 'Pfitzerana'	Pfitzer Juniper					X		
<i>Koelreuteria paniculata</i>	Goldenrain Tree	X						
<i>Lagerstroemia indica</i>	Crepe Myrtle	X						
<i>Leucothoe fontanesiana</i>	Drooping Leucothoe					X		
<i>Ligustrum japonicum</i>	Japanese Privet				X			
<i>Liquidambar styracifula</i>	Sweet Gum						X	
<i>Liriodendron tulipifera</i>	Tuliptree						X	
<i>Lonicera fragrantissima</i>	Winter Honeysuckle					X		
<i>Magnolia grandiflora</i>	Southern Magnolia		X					
<i>Magnolia kobus</i>	Kobus Magnolia							X
<i>Magnolia stellata</i>	Star Magnolia					X		
<i>Malus</i> spp.	var. Crabapples							X
<i>Malus tschonoskii</i>	Flowering Crabapples							X
<i>Malus x zumi</i> 'Calocarpa'	Redbud Crabapple							X
<i>Metasequoia glyptostroboides</i>	Dawn Redwood		X					
<i>Myrica pensylvanica</i>	Northern Bayberry					X		
<i>Oxydendrum arboreum</i>	Sourwood	X						
<i>Parrotia persica</i>	Persian Ironwood							X
<i>Photinia fraseri</i>	Red Photinia				X			
<i>Photinia x fraseri</i>	Redtip Photinia Tree							X

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<i>Platanus acerifolia</i>	Sycamore or London Plane Tree						X	
<i>Prunus 'Okame'</i>	Okame Flowering Cherry							X
<i>Prunus caroliniana</i>	Carolina Cherry-Laurel	X						
<i>Prunus cerasifera 'Krauter Vesuvius'</i>	Flowering Plum							X
<i>Prunus serrulata</i> var's.	Japanese Flowering Cherry varieties						X	
<i>Prunus x hillieri</i> 'Spire'	Spire Cherry							X
<i>Prunus x yedoensis</i> 'Akebono'	Akebono Yoshino Flowering Cherry						X	
<i>Pyrus calleryana</i> 'Aristocrat'	Aristocrat Flowering Pear							X
<i>Pyrus calleryana</i> 'Capital', 'Chanticleer'	Flowering Pears						X	
<i>Quercus acutissima</i>	Sawtooth Oak						X	
<i>Quercus coccinea</i>	Scarlet Oak						X	
<i>Quercus ilex</i>	Holly Oak							X
<i>Quercus imbricaria</i>	Single Oak						X	
<i>Quercus palustris</i> 'Crownright'	Crownright Pin Oak						X	
<i>Quercus phellos</i>	Willow Oak						X	
<i>Quercus robur</i>	English Oak						X	
<i>Quercus robur</i> 'Fastigiata'	Upright English Oak							X
<i>Quercus rubra</i>	Red Oak						X	
<i>Quercus shumardii</i>	Shumard Oak						X	
<i>Rhododendron</i> spp.	Azaleas and Rhododendrons			X				

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<i>Sorbus ainfolia</i>	Korena Mountain Ash						X	
<i>Sorbus aria</i>	Whitebeam						X	
<i>Sorbus tianshanica</i> 'Dwardcrown'	Red Cascade Mountain Ash							X
<i>Sorbus x hybrida</i>	Oak-leaved Mountain Ash							X
<i>Styrax japonica</i>	Japanese Snowdrop Tree							X
<i>Syringa reticulata</i> (<i>amurensis</i> var. <i>japonica</i>)	Japanese Tree Lilac							X
<i>Taxus cuspidata</i>	Japanese Yew			X				
<i>Thuja plicata</i>	Western Red Cedar		X					
<i>Tilia cordata</i> 'Chancelor'	Littleleaf Linden						X	
<i>Tilia cordata</i> 'Greenspire'	Littleleaf Linden						X	
<i>Tilia tomentosa</i>	Silver Linden						X	
<i>Tilia x euchlora</i>	Crimean Linden						X	
<i>Tsuga spp.</i>	var. Hemlocks		X					
<i>Ulmus 'Pioneer'</i> 'Homestead'	Hybrid Elms						X	