

ARTICLE XXV

LANDSCAPE STANDARDS

Section 25.1 Description and Purpose

It is the purpose of this article to require buffer zones and landscape screening to reduce negative impacts between incompatible land uses and to provide for landscaping within parking lots. It is further intended to preserve and enhance aesthetic qualities, privacy and land values within the Township.

Section 25.2 Buffer Zone Required

- (a) A buffer zone shall be required on the subject lot or parcel between zoning districts as indicated on Table 25-1.
- (b) A buffer zone shall be required, even if the abutting parcel is unimproved land.
- (c) Whenever a developed parcel of land changes to a more intense use, the use expands, or site plan approval is required, a buffer zone shall be established in accordance with requirements of this article.
- (d) If existing conditions on the lot or parcel are such that compliance with the buffer zone requirements is not possible, then the Planning Commission shall determine the character of the buffer zone to be required based on the following criteria:
 - (1) Traffic impacts.
 - (2) Increased building or parking coverage on the parcel.
 - (3) Increased outdoor display area.
 - (4) Physical characteristics of the site, such as topography, existing building locations, and site access.
 - (5) Other physical conditions that prevent or impede the ability to place the required buffer zone.
 - (6) Visual impact upon adjoining property.
- (e) If two zoning districts requiring a buffer zone are separated by a public street, the design of the buffer zone shall be determined by the

Planning Commission based on the criteria in subsection (d) of this section.

- (f) For site situations not addressed in Table 25.1, the Planning Commission shall determine required buffer zone, if any, on a case by case basis.

**TABLE 25-1:
LANDSCAPE BUFFER MATRIX ⁽¹⁾
Adjacent Zone**

Subject Zone	RE	R-1	R-2	R-3	R-4	O	C	I	NR	WP	PUD	AR
RE												A
R-1												A
R-2												A
R-3	B	A	A									A
R-4	A	A	A	A								A
O	B	B	B	B	B				C	C	C	B
C	A	A	A	A	A	B			B	B	B	B
I	A	A	A	A	A	A	A		A	A	A	A
NR												
WP												
PUD	*	*	*	*	*	*	*	*	*	*	*	*
AG												

** Read from subject zone across to adjacent zone.*

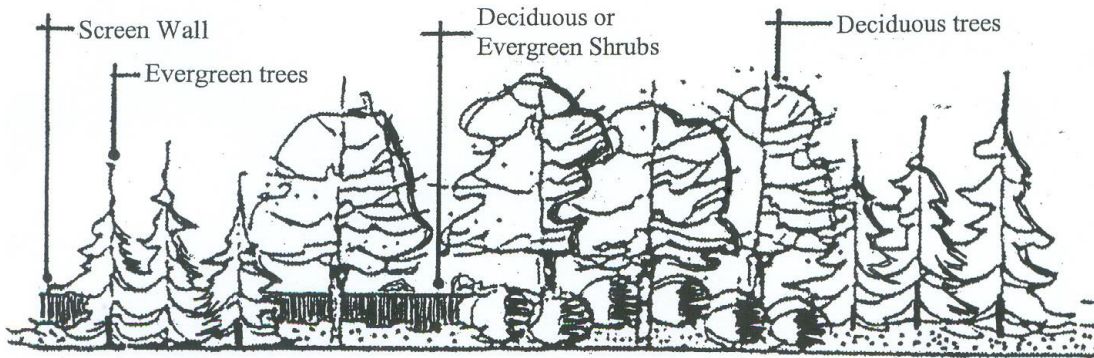
LEGEND FOR TABLE 25-1:		
A	=	Buffer zone A
B	=	Buffer zone B
C	=	Buffer zone C
•		No buffer required
A	=	If commercial or industrial use or mixed uses in PUD
B	=	If multiple-family residential, two-family or attached single-family use in PUD
C	=	If office use in PUD
•	=	If exclusively single-family detached in PUD, not required

⁽¹⁾ Existing buildings and land use, lawful at the effective date of the ordinance from which this article is derived shall comply with the landscape buffer matrix table only to the extent deemed reasonable and practical by the Planning Commission, given physical and space limitations of the existing site, building placement and established accessory buildings. Standards of Section 25.2(d) shall be used in making this determination.

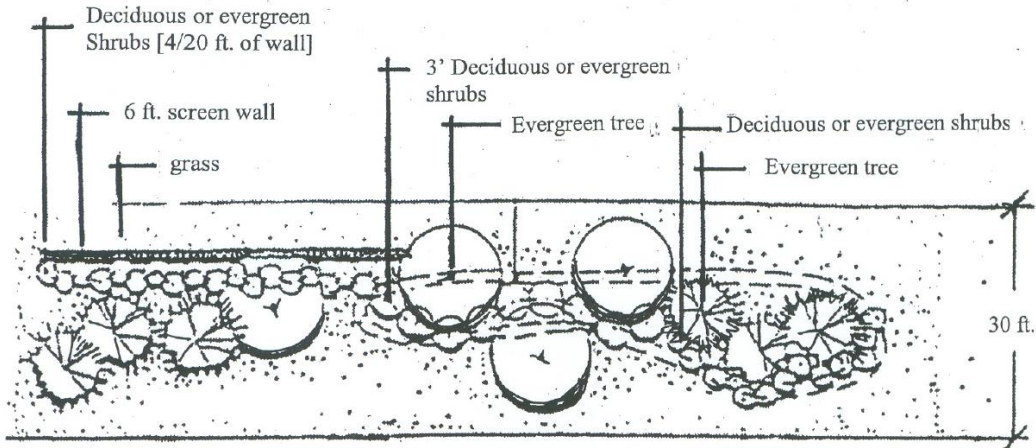
Section 25.3 Buffer Zone Development Standards

Required buffer zones shall comply with the following standards:

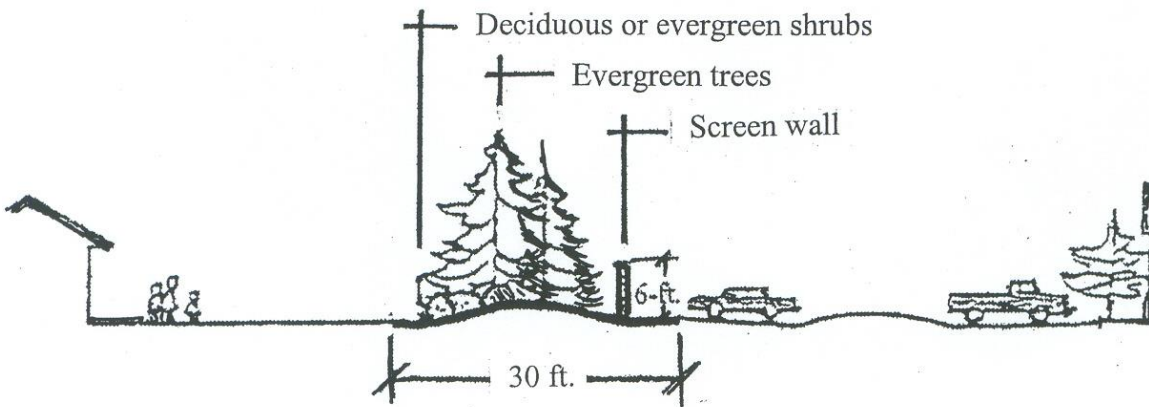
- (a) Buffer Zone Level A
 - (1) Thirty foot minimum width.
 - (2) The equivalent of one canopy tree per 20 linear feet of buffer zone length.
 - (3) Six-foot high continuous obscuring screen comprised of plant material, berming, screen walls or fencing, or any combination of these elements.
 - (4) If berming is used for all or part of the buffer zone, all required plant material shall be placed on the top and side slope facing the exterior of the site.
 - (5) If a screen wall or fence is used for all or part of the buffer zone then:
 - a. The equivalent of four shrubs is required per 20 linear feet of wall or fence with at least 50 percent being 24 inches high at the time of planting.
 - b. All required plant materials shall be on the exterior side of the buffer strip.
 - (6) All areas of the buffer strip outside shrub or flower beds shall be covered with grass or other living ground cover.
 - (7) All applicable standards in Section 25.8.



ELEVATION: *Buffer Zone A*



PLAN VIEW: Buffer Zone A

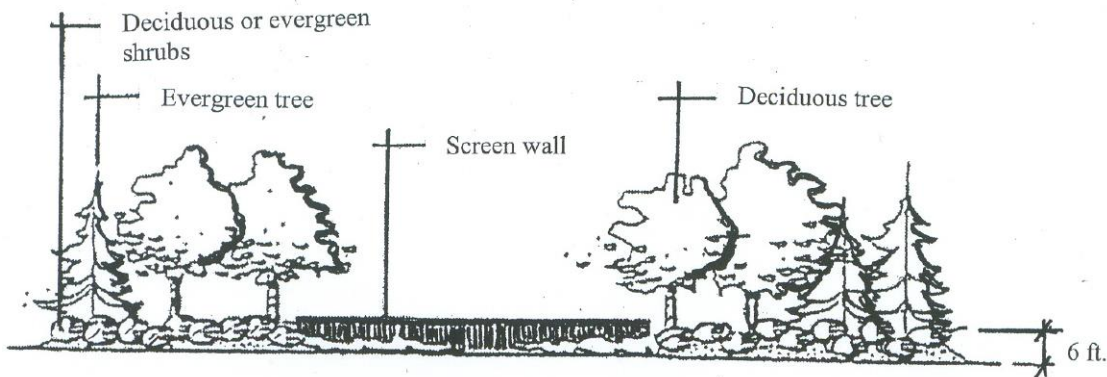


CROSS-SECTION: Buffer Zone A

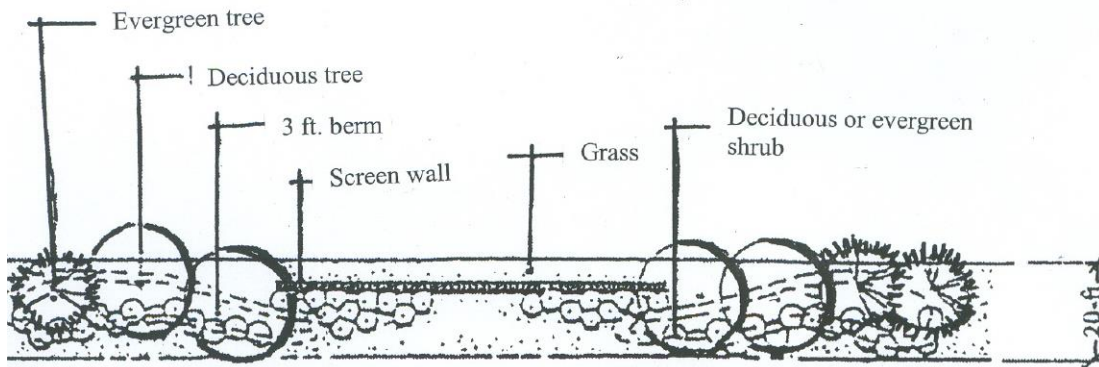
(b) Buffer Zone Level B

- (1) Twenty-foot minimum width.
- (2) The equivalent of one canopy tree per 20 linear feet of buffer zone length.
- (3) Six-foot high continuous obscuring screen comprised of plant material, berming, screen walls or fencing, or any combination of these elements.
- (4) If berming is used for all or part of the buffer zone, all required plant material shall be placed on the top and side slope facing the exterior of the site.

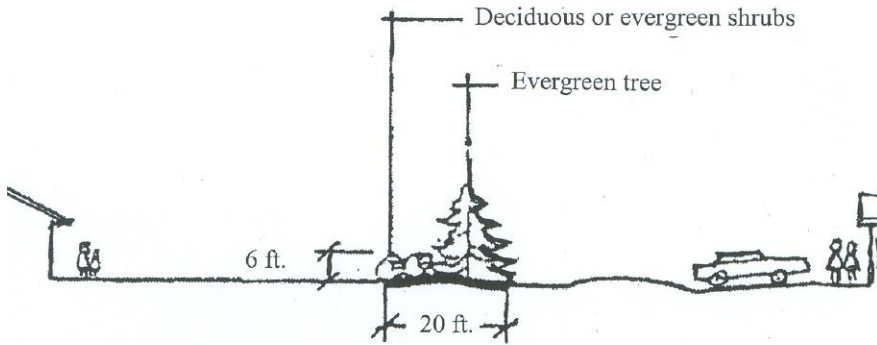
- (5) If a screen wall or fence is used for all or part of the buffer zone, then:
 - a. The equivalent of four shrubs is required per 20 linear feet of wall or fence with at least 50 percent being 24 inches high at the time of planting.
 - b. All required plant materials shall be on the exterior side of the buffer strip.
- (6) All areas of the buffer strip outside shrub or flower beds shall be covered with grass or other living ground cover.
- (7) All applicable standards in section 25.8.



ELEVATION: Buffer Zone B



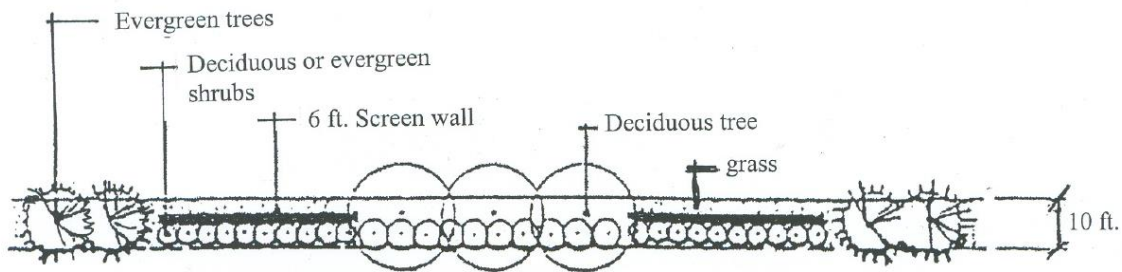
PLAN VIEW: Buffer Zone B



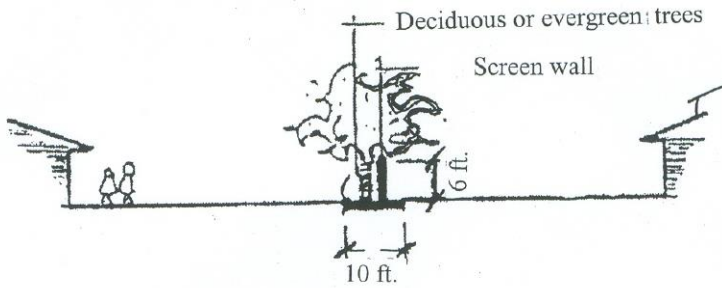
CROSS-SECTION: *Buffer Zone B*

(c) Buffer Zone Level C

- (1) Ten-foot minimum width.
- (2) The equivalent of one canopy tree per 20 linear feet of buffer zone length.
- (3) Six-foot high continuous obscuring screen comprised of plant material, berming, screen walls or fencing, or any combination of these elements.
- (4) If berming is used for all or part of the buffer zone, then:
 - a. All required plant material shall be placed on the top and side slope facing the exterior of the site.
 - b. The minimum buffer zone width shall be increased as needed to accommodate a maximum slope of three feet horizontal to one foot vertical.
- (5) If a screen wall or fence is used for all or part of the buffer zone, then:
 - a. The equivalent of four shrubs is required per 20 linear feet of wall or fence with at least 50 percent being 24 inches high at the time of planting.
 - b. All required plant materials shall be on the exterior side of the buffer strip.
- (6) All applicable standards in section 25.8.



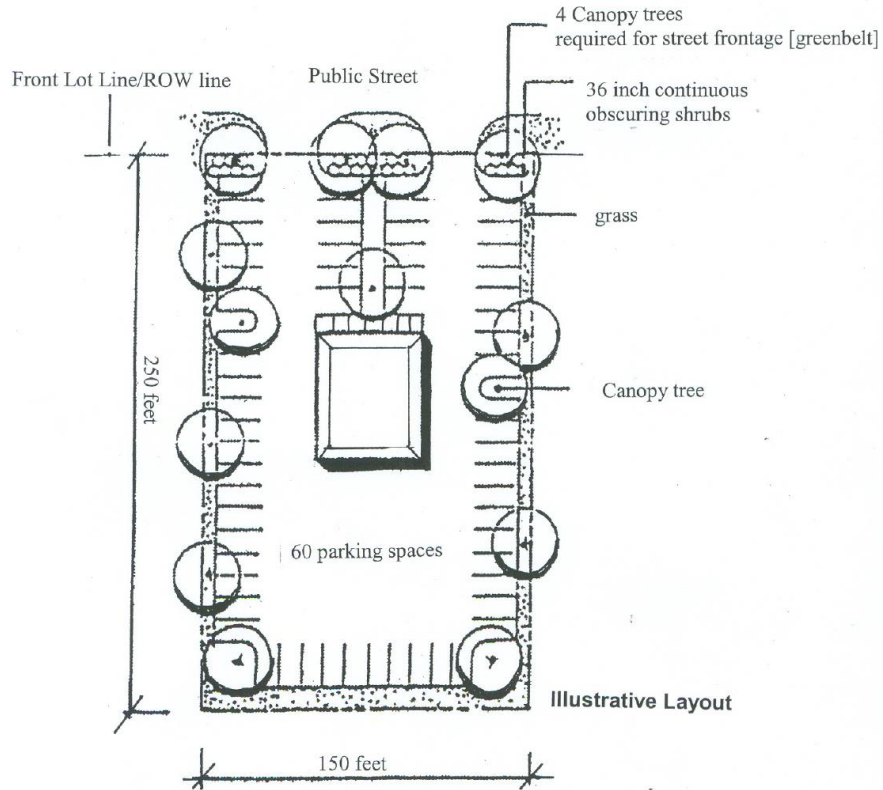
PLAN VIEW: *Buffer Zone C*



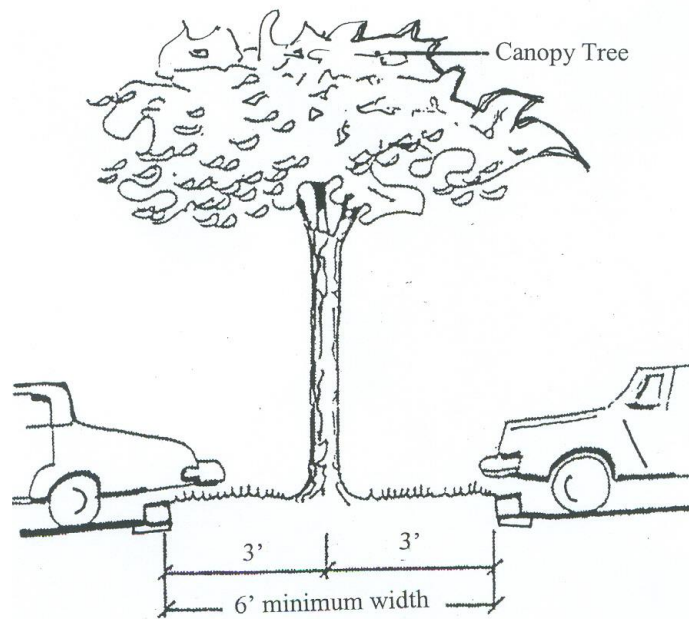
CROSS-SECTION: *Buffer Zone C*

Section 25.4 Off-Street Parking Areas

- (a) Off-street parking areas containing five or more parking spaces shall be provided with landscaping in accordance with the following:
 - 5-24 spaces: One canopy tree and 100 square feet of landscape area per six spaces or fraction thereof.
 - 25-100 spaces: One canopy tree and 100 square feet of landscape area per 10 spaces or fraction thereof.
 - 101 + spaces: One canopy tree and 100 square feet of landscape area per 12 spaces or fraction thereof.
- (b) In no case shall any buffer zone or greenbelt required in sections 25.6 and 25.7 be considered a substitute for off-street parking landscape area.



LANDSCAPE STANDARDS FOR OFF-STREET PARKING AREAS



TYPICAL OFF-STREET PARKING LANDSCAPE AREA

Section 25.5 Off-Street Parking Area Landscape Standards

Required parking lot landscape areas shall comply with the following standards:

- (a) The minimum size of a landscape area shall be 400 square feet and 20 feet minimum dimension.
- (b) Grass, shredded bark, stone, or a living ground cover shall cover all landscaped areas.
- (c) All landscape areas shall contain at least one canopy tree. The trees shall be located to prevent damage by motor vehicles.
- (d) Landscaping shall be dispersed throughout the parking lot in order to break up large expanses of impervious surfaces and shall not obscure traffic signs or fire hydrants. Except in lots with 24 or less spaces, required landscaping may be on the perimeter of the parking lot.
- (e) At least 25 percent of the required trees shall be installed in the interior of the parking area. The interior shall be considered as any point ten feet from the boundary of the parking lot.
- (f) Raised curbs shall protect all landscape area.
- (g) Where any parking area, excepting areas serving one or two-family dwellings, abuts or faces a public right-of-way, a three-foot high continuous obscuring screen shall be required between the parking area and the public road right-of-way line. The screen may be comprised of plant material, berming, or any combination of these elements.
- (h) All applicable standards in section 25.8.

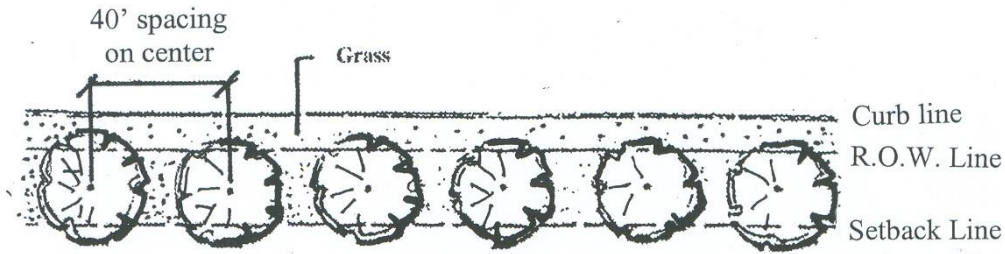
Section 25.6 Greenbelts

- (a) Greenbelts shall be required where any developed parcel abuts or faces a public right of way in the Office, Commercial, or Industrial Zoning Districts.
- (b) If a buffer zone is required along a public right-of-way, then the greenbelt requirement shall be waived.

Section 25.7 Greenbelt Development Standards

All greenbelts shall comply with the following standards:

- (a) One canopy tree for every 40 linear feet of frontage abutting a public right-of-way.
- (b) All greenbelts shall be covered by grass.
- (c) The width of the greenbelt shall correspond to the required front setback requirements for off-street parking areas contained in Article XXIII.
- (d) All applicable standards in section 25.8.



**PLAN VIEW - CONTINUOUS ROW OF
EQUALLY SPACED CANOPY TREES**

GREENBELT TYPICAL DETAIL

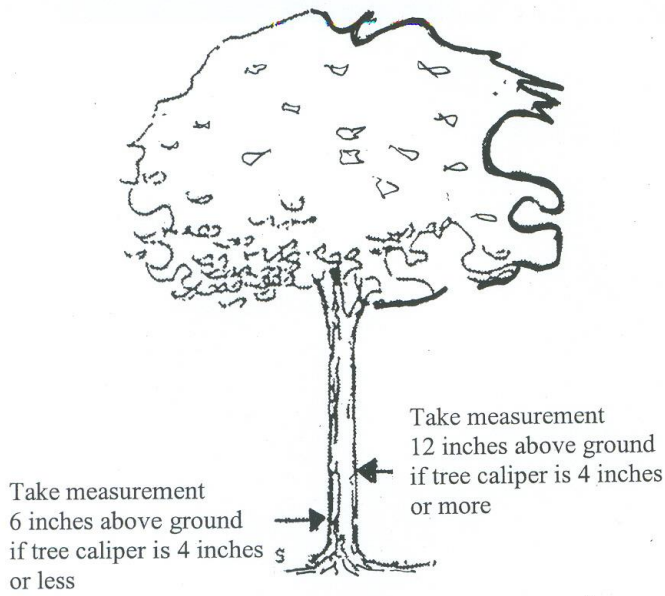
Section 25.8 General landscape Development Standards

(a) Minimum plant material standards:

- (1) All plant material shall be hardy, and free of disease and insects.
- (2) All plant materials shall be installed so as not to alter drainage patterns on the site or on adjacent properties.
- (3) Minimum plant size at time of planting:

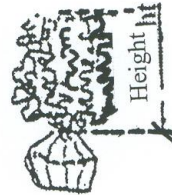
Deciduous canopy tree	2 ½ inch caliper
Deciduous ornamental tree	2 inch caliper
Evergreen tree	6 foot height
Deciduous shrub	2 foot height
Upright evergreen shrub	2 foot height
Spreading evergreen shrub	18 inch spread

- (4) Existing plant material which complies with the standards of this Article may be retained and shall count as credit toward meeting the standards of this Article.
- (5) Plant materials located within 10 feet of a fire hydrant shall not exceed 12 inches in height.

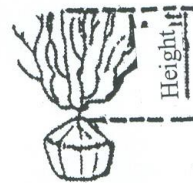


Caliper = Diameter of trunk

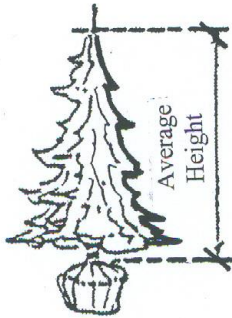
TREE CALIPER MEASUREMENT TECHNIQUE



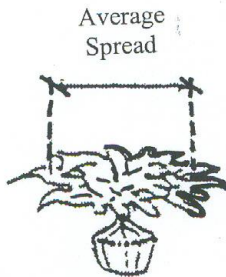
Upright evergreen shrub



Deciduous shrub



Evergreen tree



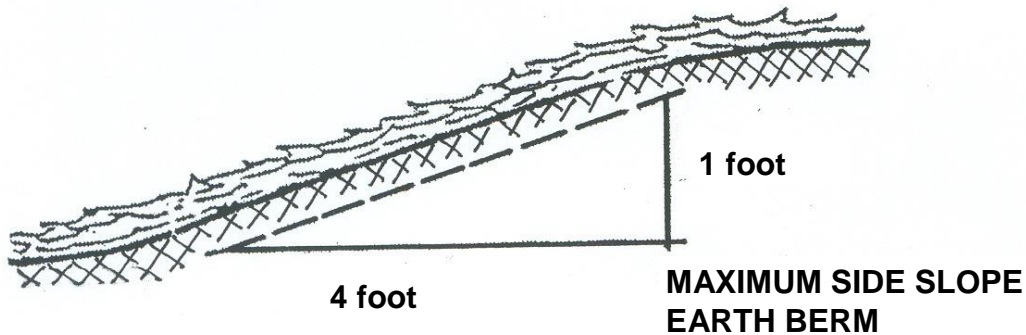
Spreading evergreen shrub

PLANT SIZES

Plant size is measured by height or spread illustrated

(b) Minimum standards for berms:

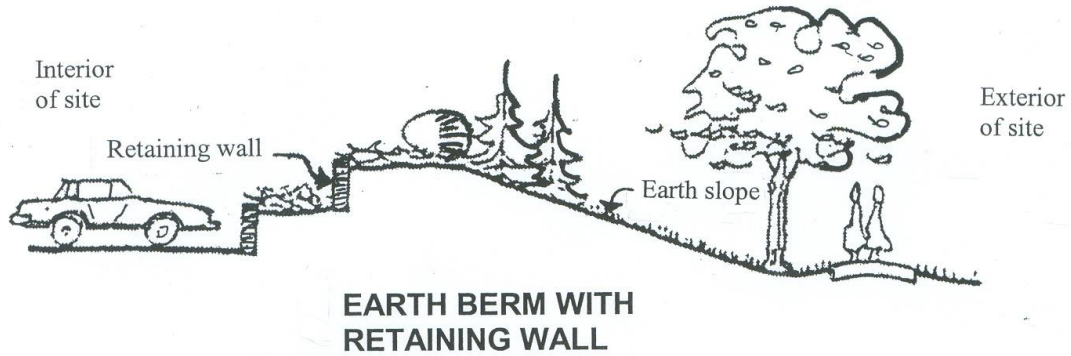
- (1) Berms shall be constructed so as to maintain a side slope not to exceed a one foot rise to four (4) foot horizontal ratio.
- (2) Berm areas not containing plants shall be covered with grass or other living ground cover.
- (3) Berms shall be constructed so as not to alter drainage patterns on an adjacent property.
- (4) If the berm is constructed with a retaining wall or by terracing, the earthen slope shall face the exterior of the site.



(c) Minimum standards for screen walls and fences:

- (1) All screen walls and fences shall be constructed of new, durable, weather resistant and easily maintainable materials. Chain link and barbed wire fences are not permitted.
- (2) The wall or fence may be constructed with openings that do not exceed 20 percent of the wall surface. The opening shall allow passage of air but shall not reduce the obscuring effect of the wall.
- (3) Screen walls or fences shall be constructed so as not to alter drainage patterns on adjacent properties.
- (4) Storm water detention / retention. Storm water detention/ retention areas shall be permitted within buffer zones provided they do not reduce the screening effect.
- (5) *Solid waste dumpsters.* Solid waste dumpsters may be located in buffer zones, provided they are screened by a continuous opaque wall or fence six feet in height.
- (6) Requirements for projects developed in phases. If a land development is constructed in phases, required landscaping may also be installed in phases. The Planning Commission may require buffer zones or screening necessary to obscure and protect abutting uses in their entirety within the first phase.
- (7) Installation and maintenance provisions. All landscape

materials required by this Article shall be maintained in good condition. No required plant materials or landscape area shall be eliminated from the site. Dead or diseased plant materials shall be replaced within one growing season.



Section 25.9 Prohibited Tree and Plant Species

Table 25-2 in this section enumerates species that are prohibited within new and required landscape areas due to their brittleness, susceptibility to disease and insects, excessive root structure, excessive litter, susceptibility to road salt damage and/or other undesirable characteristics.

Table 25-2 Prohibited Species

<u>Botanical Name</u>	<u>Common Name</u>
Trees:	
<i>Acer Negundo</i>	Box Elder
<i>Acer Platanoides, Saccharinum</i>	Maples [Norway, Silver]
<i>Ailantus Altissima</i>	Tree of Heaven
<i>Betula Spp.</i>	Birch
<i>Catalpa Speciosa</i>	Catalpa
<i>Eleagnus Augustifolia</i>	Russian Olive
<i>Fraxinus</i>	Ash
<i>Ginkgo Biloba (Female)</i>	Female Ginkgo
<i>Maclura Pomifera</i>	Osage Orange
<i>Morus Spp.</i>	Mulberry
<i>Populus Spp.</i>	Cottonwood, Poplar, Aspen
<i>Prunus Spp.</i>	Cherry, Plum
<i>Salix Spp.</i>	Willow
<i>Ulmus Pumila</i>	Elm [Siberian]
<i>Pinus Strobus</i>	White Pine
<i>Morus Spp.</i>	Mulberry
<i>Juglans Nigra</i>	Black Walnut
<i>Robina Spp.</i>	Black Locust
<i>Crateaegus Spp.</i>	Hawthorne
<i>Aesculus Hippocastanum</i>	Horsechestnut
<i>Carya Spp.</i>	Hickory
<i>A. Rubram</i>	Red Maple
<i>Gleditsia Triancanthos (with thorns)</i>	Honey Locust
<i>Ulmus Americana</i>	American Elm
<i>Ulmus Pumila</i>	Siberian Elm
<i>Ulmus Rubra</i>	Slippery Elm; Red Elm
 (1) Trees with the following characteristics are also undesirable, though not prohibited: Fruit bearing, weak wood, weeping form/branches, branching height at maturity lower than 5 feet.	
Shrubbery	
<i>Rhododendron</i>	Rhododendron
<i>Yucca</i>	Yucca
<i>Ilex</i>	Holly
<i>Mahonia</i>	Grape Holly
<i>Azalea</i>	Azalea
<i>Arborvitae</i>	Globe Arborvitae

Sections 25.10 – 25.99 [Reserved]