

City of Hudsonville, MI – Tree Ordinance Language

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ARTICLE 8. LANDSCAPING REGULATIONS

Sec. 8-1. Intent.

It is the intent of this article to specify landscape requirements for all land uses requiring site-plan review, and to provide for landscape techniques to achieve compatibility between abutting and adjacent uses, including public and private streets. The landscape regulations in this article are further intended to:

- A. Promote the public health, safety and general welfare by reducing noise, air, and visual pollutions, air temperature, and light glare;
- B. Improve air quality;
- C. Prevent soil erosion and increase water retention;
- D. Improve the appearance of on-premises parking, vehicular use areas, and property abutting public rights-of-way;
- E. Improve the aesthetics and safety of pedestrian sidewalks, both within paved areas and along public rights-of-way;
- F. Require buffering between non-compatible land uses;
- G. Protect residential privacy; and
- H. Maintain a regional native landscape character.

Sec. 8-2. Landscape definitions.

Canopy tree: A deciduous tree which typically reaches a height of 40 feet or more at maturity, and is characterized by offering optimal shading potential. Example species include: oaks, sycamores, and sugar maples.

Evergreen tree: A tree typically having a mature height of greater than 13 feet, and exhibiting green leaves throughout the year.

Landscape area: Any outdoor land area which is planned and designed for the growth of vegetation. Landscape areas would include both formal landscape beds and lawn areas.

Landscape bed: A defined area intended for the intensive planting of trees, bushes, shrubs, and other plants. Landscape beds would exclude large areas planted in grass or other common ground cover; however, they might contain small amounts of these types of vegetation.

Understory tree: A deciduous tree which typically reaches a height of between 13 and 40 feet at maturity. Understory trees would include smaller shade trees and ornamental trees.

Sec. 8-3. Screening types.

The following four-tier screening classification system is intended to provide for graduated levels of screening to be used in a variety of land-use transition situations. The screening types have been designed to correlate with the degree of incompatibility between uses. The screening types are defined in order of magnitude of screening effect. Type A screen requiring the greatest amount of screening, and Type D requires the least.

Each screening type is based on achieving a specific effect within two zones of influence. Zone 1 relates to lower level screening, and Zone 2 relates to upper level screening.

The four types of screens are defined as follows:

A. *Type A screen.*

1. Screen dimensions:

a. Height

i. Zone 1 shall be the area from ground level to eight feet.

ii. Zone 2 shall be the area from eight feet to a height of 20 feet. Screening above 20 feet is permissible.

b. Minimum width shall be 50 feet.

c. Where the land-use transition requiring such screening type occurs, minimum length shall be 100% of linear distance.

2. Required screen effects.

a. The general, required screen effect shall be to exclude all visual contact between uses, mitigate noise impacts, and to create a strong impression of spacial separation.

b. Zone 1's required screen effect shall be to create a screen which achieves total visual obstruction on a year-round basis.

c. Zone 2's required screen effect shall be to create an intermittent screen which visually obscures a minimum of 40% of the Zone 2 area on either a seasonal or year-round basis.

3. Screen materials.

a. Zone 1 screens shall be composed of a wall, fence, landscaped earth berm, planted vegetation, existing vegetation, or some combination thereof.

b. Zone 2's intermittent screens shall be achieved by some combination of evergreen and deciduous trees. (See Figure 8.1)

B. *Type B screen.*

1. Required screen dimensions:

a. Height.

i. Zone 1 shall be the area from ground level to six feet.

ii. Zone 2 shall be the area from six feet to a height of 20 feet. Screening above 20 feet is permissible.

b. Minimum width.

i. Screening in all districts, except CBD Districts, shall have a minimum width of 20 feet.

ii. Screening in CBD Districts shall have a minimum width of eight feet.

c. Where the land-use transition requiring such screening type occurs, minimum length shall be 100% of linear distance,

2. Required screen effects:

a. The general, required screen effect shall be to minimize noise and provide visual privacy where activity centers are located next to residential uses.

b. Zone 1's required screen effect shall be to create a screen which achieves total visual obstruction on a year-round basis.

c. Zone 2's required screen effect shall be to create an intermittent screen which visually obscures a minimum of 40% of the Zone 2 area on either a seasonal or year-round basis.

3. Required screen materials:

a. Zone 1 screens shall be composed of a wall, fence, landscaped earth berm, planted vegetation, existing vegetation, or some combination thereof.

b. Zone 2 intermittent screens shall be achieved by some combination of evergreen and deciduous trees. (See Figure 8.2)

C. *Type C screen.*

1. Required screen dimensions:

a. Height.

i. Zone 1 shall be the area from ground level to a height of three feet.

- ii. Zone 2 shall be the area from three feet to a minimum height of 20 feet. Screening above 20 feet is permissible.
- b. Minimum width.
 - i. Screening in all districts, except CBD Districts, shall have a minimum width of 20 feet.
 - ii. Screening in CBD Districts shall have a minimum width of eight feet.
 - c. Where the land-use transition requiring such screening type occurs, minimum length shall be 100% of linear distance.
- 2. Required screen effects:
 - a. The general, required screen effect shall be to reduce the impacts of more intensive (higher density) residential developments on single-family developments, and to soften the visual impacts of parking lots to adjacent roadways.
 - b. Zone 1's required screen effects shall be to create a screen along 60% of the required screen length, which obscures visibility by 80% to 100% on a year-round basis.
 - c. Zone 2's required screen effects shall be to create an intermittent screen which visually obscures a minimum of 40% of the Zone 2 area on either a seasonal or year-round basis.
- 3. Required screen materials:
 - a. Zone 1 screens shall be composed of a wall, fence, landscaped earth berm, planted vegetation, existing vegetation, or some combination thereof. If some portion of the screen is to consist of vegetation, no more than 50% of such vegetation shall be of a deciduous type.
 - b. Zone 2 intermittent screens shall be achieved by some combination of evergreen and deciduous **trees**. (See Figure 8.3)
- D. *Type D screen*.
 - 1. Required screen dimensions:
 - a. Minimum height.
 - i. Zone 1 shall be the area from ground level to a height of three feet.
 - ii. Zone 2 shall be the area from three feet to 20 feet. Screening above 20 feet is permissible.
 - b. Minimum width.
 - i. Screening in all districts, except CBD Districts, shall have a minimum width of ten feet.
 - ii. Screening in CBD Districts shall have a minimum width of eight feet.
 - c. Where the land-use transition requiring such screening type occurs, minimum length shall be 100% of linear distance.
 - 2. Required screen effects.
 - a. The general, required screen effects shall be to accomplish physical separation without substantial visual separation.
 - b. Zone 1's required screen effects shall be to create a screen along 30% of the required screen length which obscures visibility by 80% to 100% on a year-round basis.
 - c. Zone 2's required screen length shall be to create an intermittent screen which visually obscures a minimum of 25% of the Zone 2 area on either a seasonal or year-round basis.
 - 3. Required screen materials.
 - a. Zone 1 screens shall be composed of a wall, fence, landscaped earth berm, planted vegetation, existing vegetation, or some combination thereof. If some portion of the screen is to consist of vegetation, no more than 50% of such vegetation shall be of a deciduous type.
 - b. Zone 2 intermittent screens shall be achieved by some combination of evergreen and deciduous **trees**. (See Figure 8.4)

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Sec. 8-4. Required peripheral screening.

A. *Between abutting land uses.* The type of landscape screen (A, B, C, or D) required between abutting land uses shall be that screen type indicated in Table 8.1. To determine the required screen, identify the row containing the zoning district of the proposed project (subject zone), and read across that row to the column labeled with the zoning district in which the abutting land uses are located within. The cell at the intersection of the subject-zone row and the appropriate abutting-zone column will contain a letter indicating the screen type required for that combination of land uses.

B. *Between a proposed use and a public or private street.* Landscape screening between land uses and a public or private street in all zoning districts except the R-1 District, shall be provided as follows:

1. If no parking, loading, or paved areas are visible from the roadway, the equivalent of one canopy or evergreen tree for every 35 linear feet of frontage abutting a public street shall be provided within the front yard. All fractional numbers should be rounded upward.

TABLE 8.1. LANDSCAPE SCREENING MATRIX

TABLE INSET:

Abutting Zone													
Subject Zone		R-1	R-2	R-3	R-4	MHP	PF	CBD I-G	CBD I-OS	LC	HC	I-1	I-2
	R-2		D	D	D	D	D	D	D	D	D	D	D
R-3		C	C	C	D	D	D	D	D	D	D	D	D
R-4		C	C	C	C	D	D	D	D	D	D	D	D
MHP		C	C	C	C	C	C	D	D	D	D	D	D
PF		D	D	D	D	D	D	D	D	D	D	D	D
CBD-1-G		B	B	B	B	B	B	D	D	D	D	D	D
CBD-1-OS		B	B	B	B	B	B	D	D	D	D	D	D
CBD-2		B	B	B	B	B	B	D	D	D	D	D	D

	LC	B	B	B	B	B	B	D	D	D	D	D	D
	HC	B	B	B	B	B	B	D	D	D	D	D	D
	I-1	A	A	A	A	A	A	A	A	C	C	D	D
	I-2	A	A	A	A	A	A	A	A	C	C	D	D

Understory trees may be substituted for required canopy trees at a ratio of two understory trees for each canopy tree. However, understory trees may not be substituted for more than 50% of the canopy trees required.

2. If a parking or paved area is visible from the roadway, but there are no loading areas, vehicle storage areas, or significant trucking activities in view from the roadway, a Type-C screen shall be required.
3. If there are loading areas, vehicle storage, or significant trucking activities visible from the roadway, a Type-B screen shall be required to screen these activities, with a Type-C screen being required for any remaining areas.

Sec. 8-5. Landscaping requirements for on-premises parking areas.

- A. *Parking lots with 20 or fewer spaces.* Parking lots having 20 or fewer parking spaces shall require no landscaping internal to the parking area.
- B. *Parking lots with 21 to 100 spaces.* Parking lots having 21 to 100 parking spaces shall allocate five percent of the parking area to landscaping.
- C. *Parking lots with more than 100 spaces.* Parking lots having more than 100 parking spaces shall allocate eight percent of the parking area to landscaping.
- D. *Required number of trees.* One canopy tree for every ten parking spaces over 20 shall be required. In cases where it is not possible to allocate sufficient landscape space to support a canopy tree, or where other site limitations make canopy trees impractical (i.e. proximity to overhead lines, or underground utilities.), the planning commission may approve the substitution of trees of lower height.
- E. *Design standards.* Landscaping required for on-premises parking lots shall be provided in accordance with the following design principles:
 1. All required landscaping shall be located within the perimeter of the parking area.
 2. Landscaping shall be dispersed throughout the parking lot, and shall not be located in any other, required landscape screen area.
 3. All landscaped beds which abut a parking lot, or any landscaped area which is internal to a parking lot shall be protected with continuous concrete curbing.
 4. Trees shall be installed in such a manner that shading of parked vehicles is maximized.
 5. Landscaping shall be so arranged so as not to jeopardize security and surveillance.

Sec. 8-6. General landscaping standards.

- A. *Areas required to be landscaped for one- or two-family properties.* For single- or two-family residential properties, all land area not covered by buildings or paved surfaces shall be landscaped with lawn or landscape beds. Gardens shall be an exception to this provision.

B. *Areas required to be landscaped for all uses other than one- or two-family properties.* Other than one- or two-family properties, all land area not covered by buildings or parking surface shall be landscaped in accordance with a landscape site plan submitted to the planning commission. The landscape plan shall indicate what type of ground cover is proposed outside of planting beds. The planning commission may permit areas to be left in a natural state, but only in cases where such areas meet the intent of this article for screening, and when such areas have significant aesthetic or natural value.

C. *Design standards.*

1. If plants or shrubs are required as part of a screen involving a fence or wall, such plants and shrubs shall be placed on the less intense side of the wall, or where abutting a roadway they shall be placed on the road side of the fence or wall.

2. All landscaped areas shall be installed in such a manner so as not to alter drainage patterns either on-premises or on adjacent properties, except in conformance with an approved drainage plan.

3. All landscaping shall be kept free of all clear-vision areas as defined in this ordinance.

D. *Landscape area requirements for canopy trees.* A landscaped area of 200 square feet shall be required for an individual canopy tree. This requirement may be reduced to 100 square feet in cases where an irrigation system is to be installed. An additional 50 square feet of landscaped area shall be required for each additional canopy tree where grouped.

E. *Landscape area requirements for understory trees.* A landscaped area of 100 square feet shall be required for an individual understory tree. This requirement may be reduced to 25 square feet in cases where an irrigation system is to be installed. An additional ten square feet of landscaped area shall be required for each additional understory tree in a group.

F. *Required tree qualities.* Required trees and other landscape materials to be used near roadways, rights-of-way, or in parking areas shall have the following qualities:

1. Longevity,
2. No sap,
3. Hearty and resistant to motor exhaust fumes and road salt, and
4. Limited root system.

G. *Evaluation of screening effects.* Compliance with attainment of required screening effects or natural vegetation will be judged on the basis of the average mature height and density of foliage of the subject species, or field observation of existing vegetation.

H. *Permitted time period to achieve required screen effects.* Where specific screening effects are required, all plant materials shall achieve the horizontal and vertical effects required of this ordinance within four years of initial installation.

I. *Protection of existing vegetation during construction.* Where existing vegetation on a site is proposed for retention, a highly visible fence shall be erected along the drip-line of canopy trees. In the case of grouped vegetation, five feet from the boundary of the vegetation to be retained.

Sec. 8-7. Tree and plant species.

A. *Recommended tree and plant species.* As identified in section 8-1, one of the intentions of this article is the maintenance of a regional-native-landscape character. This is important because of the unique natural landscape quality that is found in the Hudsonville area. A landscape composition that occurs no where else in the region or even the midwest.

The importance stems from preserving a declining supply of native plants, which so many animals, birds, and insects depend upon for their survival. These species have adapted with a symbiotic relationship that goes back several thousand years. In many cases exotic (non-native) species, do not provide the proper opportunities for food, shelter, and nesting. If native vegetation is lost, the preservation of Hudsonville's fauna is put at risk.

For the above reasons, the following list of plant species is recommended for use in required landscape plantings:

1. Canopy trees.

TABLE INSET:

Common Name	Horticultural Name:
Sugar Maple	Acer Saccharum
Beech	Fagus Grandifolia
Yellow Birch	Betula Alleghaniensis
Paper Birch	Betula Papyrifera
White Ash*	Fraxinus Americana
Black Walnut	Juglans Nigra
Ironwood	Ostrya Virginiana
Black Cherry	Prunus Serotina
Choke Cherry	Prunus Virginiana
Swamp White Oak	Quercus Bicolor
Red Oak*	Quercus Rubra
Black Oak*	Quercus Velutina
Basswood*	Tilia Americana
Slippery Elm	Ulmus Rubra
Rock Elm	Ulmus Thomasii
Eastern White Pine	Pinus Strobus

* Do well as street trees.

2. Understory trees.

TABLE INSET:

Common Name	Horticultural Name
Alleghany Serviceberry	Amelanchier Laevis
Eastern Redbud	Cercis Canadensis
Alternate-Leaf Dogwood	Cornus Alternifolia

Hazelnut	Corylus Americana
Downy Hawthorne	Crataegus Mollis
Leatherwood	Dirca Palustris
Creeping Strawberry-Bush	Euonymus Obovata
Blue Ash	Fraxinus Quadrangulata
Sand Cherry	Prunus Pumila
Nannyberry	Viburnum Lentago

3. Shrubs.

TABLE INSET:

Common Name	Horticultural Name
Chokeberry	Aronia Prunifolia
Silky Dogwood	Cornus Ammomum
Red-Twigged Dogwood	Cornus Stolonifera
Witch-Hazel	Hamemelis Virginiana
Winterberry	Ilex Verticilata
Spicebush	Lindera Bezoin
Ninebark	Physocarpus Opulifolius
Swamp Rose	Rosa Palustris
Blackberry	Rubus Alleghensis
Dwarf Raspberry	Rubus Pubescens
Sandbar Willow	Salix Interior
Pussy Willow	Salix Discolor
Common Elder	Sambucus Canadensis
Sassafras	Sassafrass Albidum
American Bladdernut	Staphylea Trifolia
Mapleleaf Viburnum	Viburnum Acerifolium
High-Bush Cranberry	Viburnum Trilobum
Common Juniper	Juniperus Communis
Canada Yew	Taxus Canadensis

Cultivars of the plants listed above may also be used as an acceptable substitute.

B. *Required amount of recommended tree and plant species.* To achieve the maintenance of a regional native landscape a minimum of 60% of all plants included in the landscape portion of a site plan shall be selected from the recommended plant list as identified in subsection A above.

C. *Maximum amount of any one tree.* No one tree or plant species may make up more than 25% of the total amount of landscape plantings being proposed on the site plan.

D. *Prohibited trees.* The following trees shall not be permitted in curb lawns, parking areas, or in close proximity to utility lines as they split easily; their wood is brittle and breaks easily; their roots clog drains and sewers; and/or they are unusually susceptible to disease or insect pests:

TABLE INSET:

Common Name	Horticultural Name
Boxelder	Acer Negundo
Ginkgo	Ginkgo Biloba (female only)
Honey Locust	Gleditsia Triacanthos (with thorns)
Mulberry	Morus Species
Poplars	Populus Species
Black Locust	Robinia Species
Willows	Salix Species
American Elm	Ulmus Americana
Siberian Elm	U. Pumila
Slippery Elm; Red Elm	U. Rubra
Chinese Elm	U. Parvifolia

Sec. 8-8. Required tree and plant sizes at installation.

A. *Minimum sizes at time of installation.*

1. Canopy trees shall have at least a two-and-a-half-inch caliper.
2. Understory trees, except ornamental trees, shall have at least a two-inch caliper.
3. Ornamental trees shall have at least a one-and-a-half-inch caliper.
4. Evergreen trees shall have at least a five-foot height.
5. Deciduous shrubs shall have at least a two-foot height.
6. Upright evergreen shrubs shall have at least a two-foot height.
7. Spreading evergreen shrubs shall have at least a 24-inch spread.

B. *Measurement.* The above required heights shall be measured from the ground level to the top of the tree or shrub after installation.

Sec. 8-9. Berms.

A. *Slope ratio.* Berms shall be constructed so as to maintain a side slope not to exceed a one-foot rise to a three-foot run ratio.

B. *Berm covering.* Berm areas not containing planting beds shall be covered with grass and be maintained in a healthy growing condition.

C. *Plantings on berms.* When landscaping is to be planted on a berm, emphasis shall be on placing such materials on the side of the berm facing the less intense use, or on the road side of a berm.

D. *Retaining wall or terrace.* If a berm is constructed with a retaining wall or by terracing, the earthen slope shall face the exterior of the site.

Sec. 8-10. Screen walls or fences.

A. *Materials.* All screen walls and fences shall be constructed with durable, weather-resistant, and easily maintainable materials.

B. *Compatibility with surroundings.* The color, materials, finishes and forms of all walls shall be compatible with surrounding land uses or structures, as determined by the planning commission.

C. *Permitted openings in surface.* Except in cases where total opaqueness is required, walls may be constructed with openings that do not exceed 20% of the surface.

Sec. 8-11. Installation and maintenance.

A. *Installation of all required landscaping or performance guarantee of same required before occupancy.*

1. If construction is completed during a planting season, no certificate of occupancy shall be issued until the landscaping complies with the requirement of this article of the zoning ordinance.

2. If construction is completed in an off-planting season, a certificate of occupancy shall be issued only after the owner provides a performance guarantee as provided in section 15-16 of this ordinance.

B. *Standard for maintenance.* All landscaping shall be maintained in a healthy, neat, and orderly state, free from weeds and debris. All grass shall be maintained at a height not to exceed eight inches, unless specifically approved by the planning commission.

C. *Responsibility for maintenance.* The owner, tenant, or their agent shall be jointly and severally responsible for maintenance.

D. *Continuing maintenance required.* All required landscaping shall be maintained on a continuing basis. Dead plant materials shall be replaced as necessary to meet the desired effect of the original, landscape plan approval. The zoning administrator shall have the authority to make a determination of ordinance violation with regard to landscaping. If the zoning administrator issues a notice of violation, the owner shall have six months to correct the landscaping violation.

Sec. 8-12. Phasing.

If a project is constructed in phases, the landscape screen may also be constructed in phases. The planning commission shall determine the extent of landscaping required of each phase, based on:

A. Adjacent land uses;

B. Distance between land uses;

C. Operational characteristics, both on- and off-site;

D. Building heights;

E. Physical characteristics of the site; and

F. Percentage of total development which each phase represents.

Sec. 8-13. Landscape screening waiver.

A. *Factors in considering waiver.* If inspection of the site reveals that adequate landscaping screens already exist on-premises, or site-specific qualities minimize the

need for landscaping in specific areas, the planning commission may waive in whole or in part any landscape requirement contained in this article. The following factors shall be evaluated by the planning commission in making any waiver of landscaping requirements:

1. Topography variations,
 2. Existence of natural vegetation,
 3. Existing and proposed building placement,
 4. Adjacent land uses,
 5. Existence of floodplain or other non-developable areas,
 6. Recommendation of zoning administrator, and
 7. Meeting the intent of this article of the ordinance.
- B. *Planning commission obligation.* The planning commission shall not be obligated to make any waiver of landscaping requirements.