17.12.01 Validity Of Other Land Use Restrictions.

This Article does not affect the validity of any covenant, easement, equitable servitude, or other land use restriction created in accordance with law.

(Ord. No. 99-01, § 1, 1-18-99)

Sec. 10-469 to Sec. 10-471 Reserved for future use.

ARTICLE 18. LANDSCAPING REQUIREMENTS

Sec. 10-472 Landscaping Requirements.

18-01. Purpose.

The purpose of this chapter is to establish minimum standards for the provision, installation, and maintenance of landscape plantings in order to achieve a healthy, beautiful, and safe community. These regulation are intended to:

a. Foster aesthetically pleasing development that will protect and preserve the appearance and character of the community.
b. Increase the compatibility of development with both adjacent development and the natural environment.
c. Improve environmental quality by recognizing the numerous beneficial effects of landscaping upon the environment.
d. Maintain and increase the value of land by requiring landscaping to be incorporated into development, thus becoming by itself a valuable capital asset.
e. Provide direct and important physical and psychological benefits to human beings through the use of landscaping to reduce noise and glare, and to break up the monotony and soften the harsher aspects of urban development
f. Eradicate or control certain exotic plant species that have become nuisances because of their tendency to damage public and private works, to have a negative effect upon public health, or to disrupt or destroy native ecosystems.
g. Promote innovative and cost conscious approached to the design, installation, and maintenance of landscaping.
h. Establish procedures and standards for the administration and enforcement of this Landscaping Ordinance. (Ord. 99-33, § 1, 8-2-99)

18-02. Applicability.

This Landscape Ordinance shall apply to all public, private, and institutional development, except that previously approved development need not comply unless new site development approval is being sought.

In a case where there are conflicts between the landscaping requirements of this Article and the

landscaping requirements of other City of Greenwood ordinances, the stricter standard shall apply.

Special use exceptions, as identified in the Official Schedule of Uses, Article 5, shall be exempt from these landscape requirements. Special Use Exception applications shall include a landscape/buffer plan proposal subject to review and approval by the Board of Zoning Appeals (or may be delegated by the BZA to the Plan Commission as part of site development in plan approval).

The requirements of this ordinance shall be applicable to the bufferyard, streetscape, street buffer, yard, and parking lot areas specifically stated in the ordinance. Portions of a developed site that are outside those specific areas shall not be governed by these landscape requirements. (Ord. 99-33, § 1, 8-2-99)

18-03. Enforcement.

Wherever site plan review is required by this Zoning Ordinance, a landscape plan shall be a required part of such site plan. No permanent certificate of occupancy shall be issued without completion of all landscaping shown on the landscape plan required herein. A temporary certificate of occupancy may be issued for the building for a period of one year when weather condition do not permit landscape installation. Failure to implement the approved landscape plan, including preservation of existing features, or to maintain the landscaping as long as incompatibility of adjoining uses exists, shall be a violation of this Zoning Ordinance subject to the penalties outlined in Article 12. (Ord. 99-33, § 1, 8-2-99)

18-04. Content of Landscape Plan

Where required, a landscape plan shall conform to the following requirement:

a. A landscape plan is required for each lot within the proposed development. It is recommended that the landscape plan be prepared by a landscape architect, nurseryman, or other professional experienced in landscape design and the installation and care of plant materials.

b. All landscape plans submitted for approval as a component of a required site plan shall show the entire zoning lot to scale, on 24" x 36" sheets and shall contain the following information:

    1. the location and dimensions of all existing and proposed structures, parking lots and drives, roadways and right-of-way, sidewalks, bicycle paths, ground signs, refuse disposal areas, bicycle parking areas, freestanding electrical equipment, recreation facilities, utility lines and easements, freestanding structural features, and other landscape improvements, such as earth berms, walls, fences, screens, sculptures, fountains, street furniture, lights, and courts or paved areas;

    2. the name and address of the owner, developer, and plan preparer, the date the plan was prepared, scale, and north arrow;

    3. the location, quantity, size, and name – both botanical and common – of all proposed planting materials;

4. the location, size, and common name of existing trees and individual shrubs, areas of dense trees or shrubs, and other natural features, indicating which are to be preserved and which are to be removed;

5. the approximate location and generic identification of existing structures and plant materials within the yard of adjoining properties;

6. existing and proposed grading of the site, including proposed berming, indicating contours at not more than two-foot intervals;

7. specification of the type and boundaries of all proposed vegetative ground cover;

8. design of fences and other significant accessory structures;

9. the location of barriers to be placed at or beyond the drip line of any trees to be preserved, and the type of material to be used for the barrier;

10. planting and installation details as necessary to ensure conformance with all required standards;

11. details indicating specific grading measures or other protective devices where trees are to be preserved in areas of cut and fill; and,

12. a tabulation clearly displaying the relevant statistical information necessary for the Plan Commission to evaluate compliance with the provisions of this ordinance.

(Ord. 99-33, § 1, 8-2-99)

18-05. Preservation of Existing Features.

a. Trees and shrubs already existing on land subject to the provisions of this chapter shall be preserved wherever feasible. Criteria for judging the feasibility of retaining existing vegetation include:

1. the practicability of arranging site plan components around existing features. In general, plans for groups of structures should be designed so as to preserve tree masses, individual tree specimens, and small stands of trees or shrubs;

2. the condition of the vegetation with respect to continued vitality;

3. the amount of healthy vegetation the area involved will support;

4. the practical and economic possibility of designing the location and grades of proposed structures and paving to preserve existing vegetation;

5. the desirability or lack thereof of a particular tree or species by reason of its appearance; historic or ecological significance; botanical characteristics; and the function the vegetation would fulfill as a site plan component;

6. interference with utility services or encroachment into the traffic visibility triangle; and,

7. the possibility of preserving the vegetation while meeting the development needs through pruning rather than removal.

b. Existing trees that are preserved will contribute to the required landscaping, based on individual tree types. For each shade tree that is preserved, which is greater than 6 inch caliper, and is found on the approved list, the amount of new shade trees to be installed shall be reduced by two trees. Shrubbery will be evaluated in the same manner as new shrubbery based on the species. Such credit shall apply only to the required landscaping for the specific bufferyard, parking lot, commercial strip, or residential plot in which the existing vegetation is located.

c. Substantial barriers shall be specified on the Landscape Plan and shall be placed at or beyond the drip line of trees to be protected. These barriers shall remain in place during heavy construction on the site, and no vehicle, machinery, tools, chemicals, construction materials, or temporary soil deposits may be permitted within the barriers, nor may any notice or other object be nailed or stapled to protected trees.

d. Where trees are to be preserved in areas of cut or fill, specific grading measures or other protective devices, such as tree wells, tree walls, or specialized fill and pavement designs shall be required and shall be fully detailed on the Landscape Plan.

(Ord. 99-33, § 1, 8-2-99)

18-06. General Landscaping Requirements.

All land areas that are not covered with buildings and pavement or used for agricultural purposes shall be appropriately landscaped in accordance with the requirements of this section. Landscaping shall be provided in the areas specified and of the minimum intensity, specified below.

a. The tables of materials included in this chapter are classified by type. Trees are group into three categories: shade trees, ornamental trees; and evergreens. Shrubs are grouped by height: small shrubs (<2'), medium shrubs (2'-6'), and large shrubs (>6'). Plant materials not listed on the tables will be assigned a classification based on height, spread, and/or crown at maturity, using the best available resources to determine mature characteristics. For design flexibility, deciduous plat substitutions may be made on the following basis, however required evergreen plant material shall not be substituted: (Ord. 02-21, § 1, 6-3-02)
   (1) 1 Shade tree = 2 ornamental trees 2 evergreen trees
   (2) 1 ornamental tree = 1 evergreen tree
   (3) 1 large shrub = 2 medium shrubs or 4 small shrubs
   (4) 1 medium shrub = 2 small shrubs

b. Where front and rear yards overlap side yards, the yard shall be treated as part of the yard having the greater requirement.

c. The scale and nature of landscape materials shall be appropriate to the size of the structures and the available space. Materials shall be located to avoid interference with overhead and underground utilities and utility easements or vehicular or pedestrian movements and visibility. Growth characteristics should be carefully considered.

d. Plant material shall be selected to achieve an intended purpose such as shading, screening, ornamentation, etc.

e. The planting patterns of plant material shall be staggered and mixed in order to avoid long, monotonous and repetitive edges, especially along roadways. (Ord. 02-21, § 2, 6-3-02)

f. Trees shall be planted to maintain a minimum five feet clearance between the tree trunk and structures, building overhangs, walls, fences, and other trees.

g. Plantings should be arranged to promote energy conservation wherever practicable; e.g. use of tall deciduous trees on the south and west sides of buildings to provide shade from the summer sun and planting evergreens on the north of buildings to dissipate the effect of winter winds.

h. All trash dumpsters, trash pads, loading areas consisting of two or more loading spaces, loading docks, building service and outside storage areas shall be screened from land in a residential zone and must be screened if visible from a public street, Such screening may be achieved by using a minimum six feet high, completely opaque fence or wall, a six feet high berm, or a six foot high evergreen screen. Height of screen shall be measured from the grade of the nearest street.

i. Ground-mounted heating and cooling units for nonresidential or multifamily structures and above ground fuel tanks shall be adequately screened so as not to be visible from public streets and/or adjacent properties.

j. Grass and other vegetative ground cover shall be used for all open space including parking lot islands, except for:

(1) Decorative mulch planting beds containing trees and/or shrubs
(2) Inert stabilization in areas subject to severe runoff, erosion, or pending.

k. Where stone or other inert materials are to be used for ground cover, they shall be specifically identified on the landscape plan. Any area not so designated shall be required to have grass or vegetative ground cover.

l. All landscaping shall conform to the regulations established for visibility triangles to maintain safe sight distances and intersections and points of access as designated in Article 6, Section 8 of the Zoning Ordinance of the Greenwood Municipal Code.

m. Except as provided in 18-6(n) below, all landscape areas shall be separated from vehicular use areas be concrete curbing. Roll curbs may not be used for this separation. The width of curbing shall be excluded from the calculation of the minimum dimensions of all required landscape areas.

n. All landscaped areas at the front line of off-street parking spaces shall be protected from encroachment or intrusion of vehicles through the use of wheel stops. Wheel stops shall have a minimum height of six inches above the finish surface of the parking area, be properly anchored and continuously maintained in good condition. Wheel stops shall not be placed in locations of anticipated intense pedestrian traffic As an alternative, curbing can be extended to serve the same purpose, if approved by the City Engineer.

o. Minimum open space shall be as required by the Zoning Ordinance Height, Bulk, Area, and Density Provisions chapter.

p. All trees and shrubs must be planted a minimum of five feet behind the right-of-way line.

q. In no case may a tree or shrub be planted within a drainage, sewer or utility easement.

(Ord. 99-33, § 1, 8-2-99)

18-07. Bufferyard Landscaping Requirements.

a. the following bufferyard requirements are intended to physically separate and visually screen adjacent land uses that are not fully compatible. Regardless of the method chosen to provide the required bufferyard, a six feet high screen shall be used to buffer adjoining incompatible properties. Plants used exclusively for screening must reach a minimum height of 48 inches within three years of installation, and be at least 24 inches tall when planted.

b. To determine the size of the buffer, two variables are considered: the intensity of the adjacent use (as indicated in Table A, the Official Schedule of Uses) and the amount of required vegetation.

1. Use Table 18-1 to determine the buffer type required for the situation. The table assigns a minimum bufferyard to each potential development scenario. If the adjoining property has a mix of land uses, the highest intensity of use determines the bufferyard's required size.

2. If the use is not listed in Table A of the Zoning Ordinance, or if there is a dispute about which intensity level applies, planning staff shall review the use and determine the appropriate intensity rating.

3. After determining the bufferyard type, refer to Table 18-2, which enumerates the physical design requirements of each bufferyard.

c. If woodlands are located within the minimum landscaped yard, preservation may substitute for the required plants. If existing woodlands are located in only part of the minimum landscaped yard, the landscape requirement is proportionately reduced.

d. A six feet high berm, or opaque fence or wall may be located within the bufferyard reducing the required width and plant material amounts by 50 percent.

(Ord. 99-33, § 1, 8-2-99)

Table 18-01 Minimum Required Bufferyard

PROPOSED USES	ADJOINING USES: Single Family Dwelling	Two Family Dwelling	Multi Family Dwelling	Low Intensity Use	Medium Intensity Use	High Intensity Use
Single Family Dwelling	None	A*	B*	B*	C*	D*
Two Family Dwelling	A	None	A*	B*	C*	D*
Multi Family Dwelling	B	A	None	A*	B*	D*
Low Intensity Use	B	B	A	None	A*	C*
Medium Intensity Use	C	C	B	A	None	B*
High Intensity Use	D	D	D	C	B	None

* The Maximum buffer that may be required. If all or any part of the buffer has been provided by the adjacent property, the proposed use must provide only that amount of the buffer that has not been provided on the adjacent property. (Ord. 99-33, § 1, 8-2-99)

Table 18-02 Bufferyard Types

TYPE	Minimum Landscaped Yard	Landscaping Required per 35 Linear Feet of Property Line or Right-of-Way
A	10 Feet	1 shade tree and 4 large shrubs
B	20 Feet	1 shade tree and 6 large shrubs
C	30 Feet	1 shade tree, 1 evergreen tree* and 10 large shrubs
D	40 Feet	1 shade tree, 2 evergreen trees*, and 10 large shrubs
*Substitutions shall not be permitted for the evergreen trees required in Type C and D Bufferyards		

(Ord. 99-33, § 1, 8-2-99; Ord. 02-21, § 3, 6-3-02)

18-08. Parking Lot Landscaping Requirements.

The following landscape requirements applied to parking lots are intended to screen parking areas from the street, prevent large expanses of unbroken paving, and provide shade to cool paved areas during the hot summer months. The requirements are established for three areas: along the public right-of-way, along the parking lot's perimeter, and in the lot's interior.

a. Landscape Strip Along the Right-of-Way.

1. When a parking lot is located adjacent to a public right of way or public street, a landscape strip may shield views of parked cars to passing motorists and pedestrians, block headlights glare, and may establish coordination among architecturally diverse buildings.

2. These minimum requirements apply to all parking lots adjacent to a street except those used in association with single family dwellings. To provide flexible standards that reflect site constraints and opportunities, five options are available to meet the landscaped strip requirements.

(Ord. 99-33, § 1, 8-2-99)

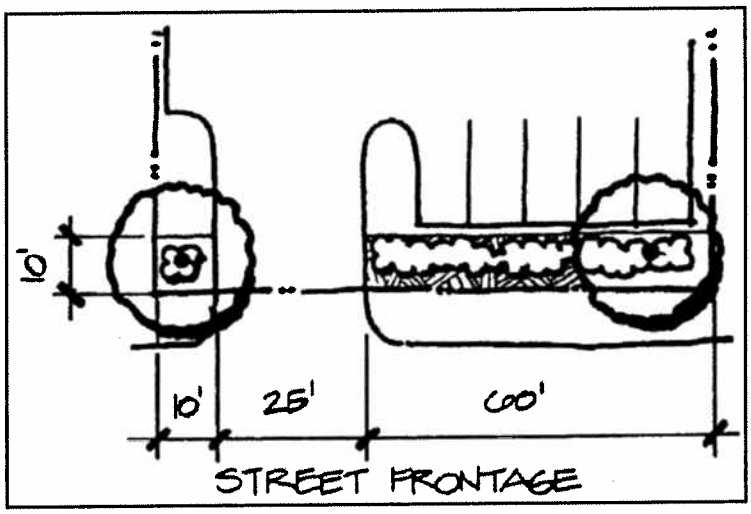

Figure 18-01. Parking Lot Landscaped Strip, Option 1

Provide a minimum ten-foot wide strip between a right way and the parking lot, planted with a minimum of one shade tree and 10 medium shrubs for every 35 linear feet of street frontage, excluding driveway openings. (Ord. 99-33, § 1, 8-2-99)

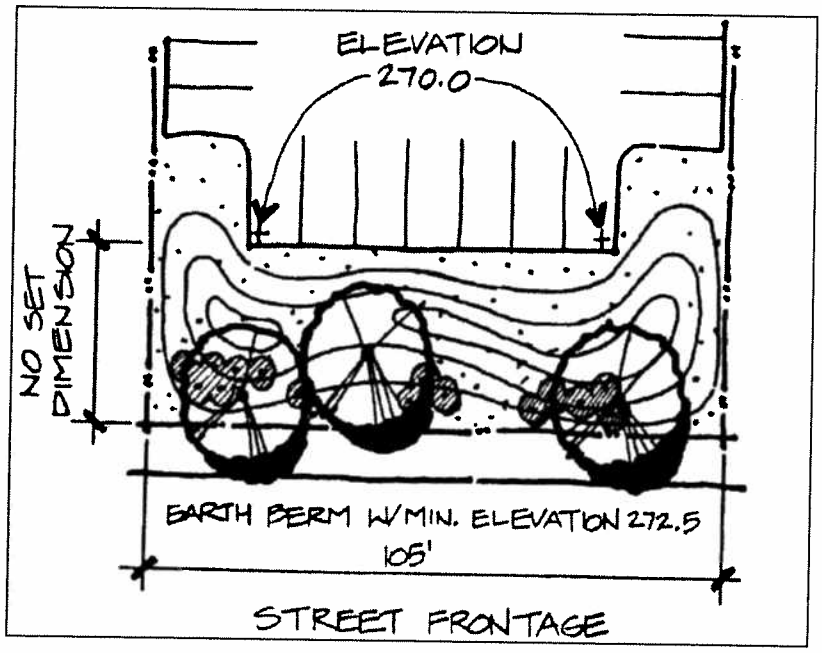

Figure 18-02. Parking Lot Landscaped Strip, Option 2

Provide a berm at least 2.5 feet higher that the finished elevation of the parking lot. The berm shall have a minimum side slope of 2:1 and a minimum crown width of two feet. Live vegetation must cover the berm with a minimum of one shade tree and 5 medium shrubs for every 35 linear feet of street frontage, excluding driveway openings. (Ord. 99-33, § 1, 8-2-99)

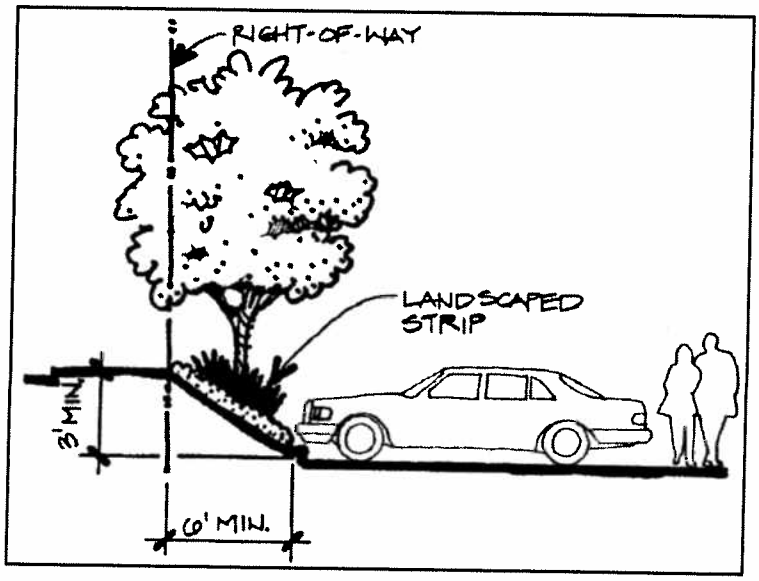

Figure 18-03. Parking Lot Landscaped Strip, Option 3

Provide a six foot landscaped strip with a minimum three feet grade drop from the right-of-way to the parking lot. A minimum of one shade tree and five medium shrubs are required for every 35 linear feet of street frontage, excluding driveway openings. (Ord. 99-33, § 1, 8-2-99)

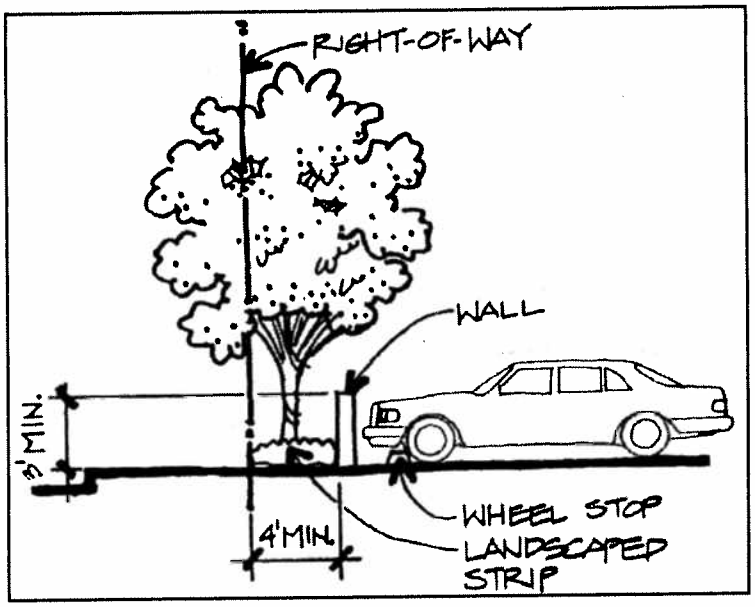

Figure 18-04. Parking Lot Landscaped Strip, Option 4

Provide a three foot high opaque fence or wall constructed of materials compatible with the principal building and a four foot wide landscaped strip planted with vegetative ground cover (low growing, dense vegetation), and a minimum of one shade tree for every 35 linear feet of street, excluding driveway openings. (Ord. 99-33, § 1, 8-2-99)

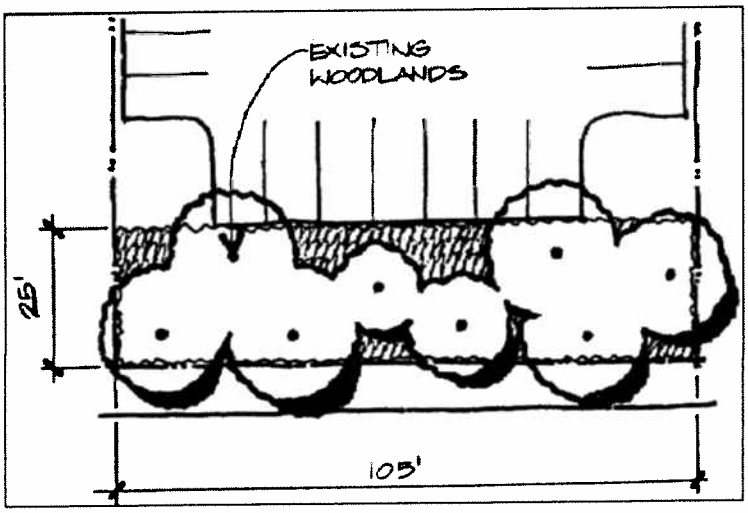

Figure 18-05. Parking Lot Landscaped Strip, Option 5

Preserve a 25 feet wide strip of existing woodlands in lieu of the landscaping requirement. (Ord. 99-33, § 1, 8-2-99)

3. Understory plants installed to meet the requirements of the parking lot landscaped strip shall be evergreen or dense deciduous shrubs. Plants used exclusively for screening must reach a minimum height of 30 inches within three years of installation and e at least 18 inches tall when planted.

b. Perimeter landscaping is required to define parking areas and prevent two adjacent lots from becoming one large expanse of paving. The required perimeter landscaping between adjacent lots does not preclude the need to provide vehicular access between the lots.

1. Figure 18-06 illustrates the required perimeter landscape strip. For lost 10,000 square feet or smaller, the landscape strip must be a minimum of three feet wide. Lots larger than 10,000 square feet must have a landscape strip at least five feet wide.

2. One tree and three small shrubs are required for every 35 linear feet, excluding vehicular access aisles. Understory plants installed to meet the requirements of the parking lot landscaped perimeter shall be evergreen or dense deciduous shrubs.

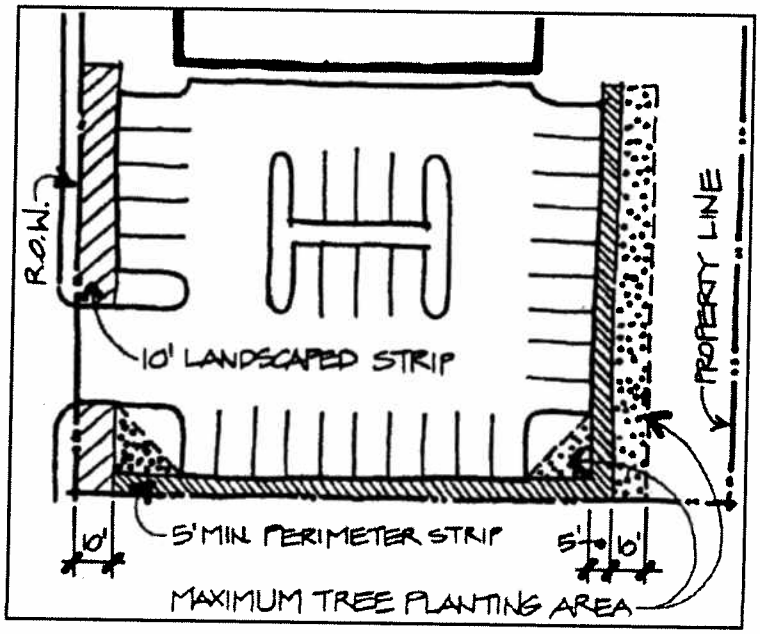

Figure 18-06. Parking Lot Perimeter (Ord. 99-33, § 1, 8-2-99)

3. The applicant may preserve existing woodlands at least 25 feet in width located within the same parcel in lieu of the above perimeter landscaping requirements.

c. Interior parking lot landscaping requirements are required for all parking lost 7,000 square feet or larger. Figure 18-07 illustrates how to calculate the required interior lot planting. All areas within the lots perimeter are counted, including planting islands, curbed areas, corner lots, parking spaces, and all interior driveways and aisles. Only driveways and aisles with no parking spaces located on either side are excluded from the interior are calculation.

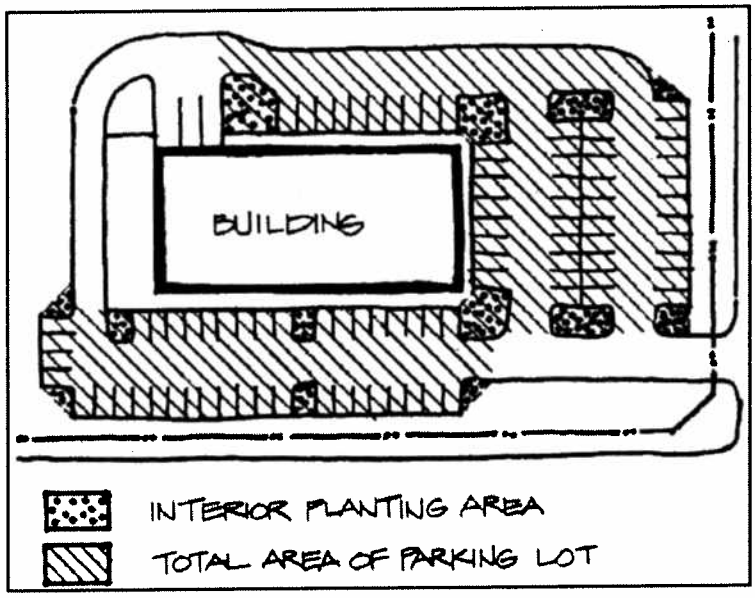

Figure 18-07. Parking Lot Interior Calculations. (Ord. 99-33, § 1, 8-2-99)

1. For all parking lots 7,000 square feet or larger, 8% of the total area must be an interior planting area.

2. Landscaped areas outside the parking lot may not be used to meet the interior planting requirement.

3. All rows of parking spaces shall be provided a terminal island with concrete curbs and at lest 130 square feet of area to protect parked vehicles, provide visibility, confine moving traffic to aisles and driveways, and provide space for landscaping.

4. Landscaped islands with concrete curbs and at least 130 square feet of area shall be provided every ten spaces or less within a row of spaces for multi-family residential sites and every 15 spaces or less within a row of spaces for commercial developments. Planting islands should be evenly spaced throughout the parking lot to consistently reduce the visual impact of long rows of parked cars. Islands shall be utilized where needed to control vehicular circulation and define major drives.

5. At least one tree shall be provided for each landscaped island area. Islands exceeding 260 sq. ft. shall have two or more trees. Trees must have a clear truck at least six feet above the finished grade to allow for visibility and vehicular circulation beneath the tree canopy. Vegetative ground cover or low shrubs listed on Table 18-08 shall be planted in all landscaped island areas. Gravel and bark mulch may not be substituted for the ground cover or low shrubs. (Ord. 02-21, § 4, 6-3-02)

6. To prevent cars from parking too close to trees or damaging shrubs, an extended curb or wheel stop must be provided. Planting islands parallel to parking spaces must be a minimum of five feet wide to allow car doors to swing open. (Ord. 99-33, § 1, 8-2-99)

18-09. Commercial and Industrial Streetscapes.

a. The following landscape strip requirements apply to all commercial and industrial zones and all nonresidential uses within a residential zone. The strip must be located on the property, adjacent to the public right-of-way or private streets, and may not include paved surfaces, with the exception of driveway openings and pedestrian sidewalks or trails that cross the strip.

b. To provide flexible standards that reflect site constraints and opportunities, three options are available to meet the landscaped strip requirements. (Ord. 99-33, § 1, 8-2-99)

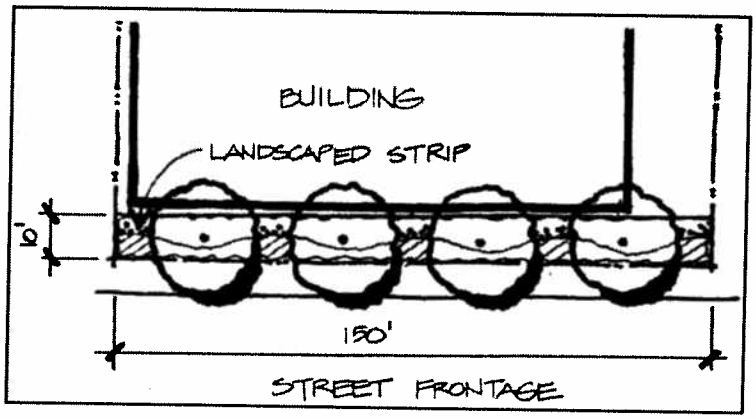

Figure 18-08 Commercial and Industrial Landscaped Strip, Option 1

Provide a minimum 10 foot wide strip between a right-of-way and the building, planted with a minimum of one shade tree and 10 medium shrubs for every 35 linear feet of street frontage, excluding driveway openings. (Ord. 99-33, § 1, 8-2-99)

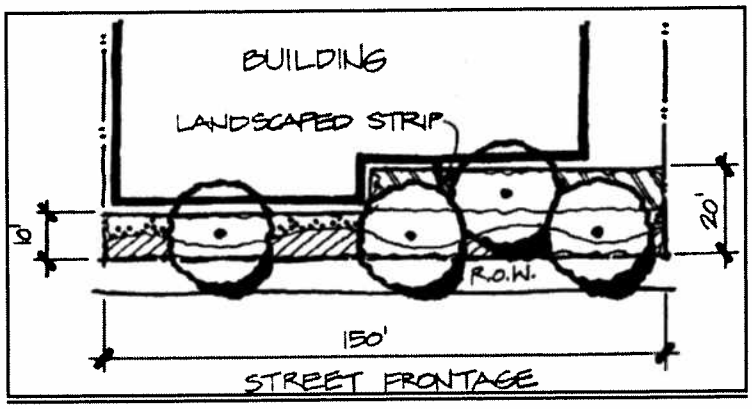

Figure 18-09. Commercial and Industrial Landscaped Strip, Option 2.

Provide a landscape strip a minimum of 10 feet wide and maximum of 20 feet wide and an average width of 15 feet strip adjacent to the public right way, planted with a minimum of one shade tree and five medium shrubs for every 35 linear feet of street frontage, excluding driveway openings. (Ord. 99-33, § 1, 8-2-99)

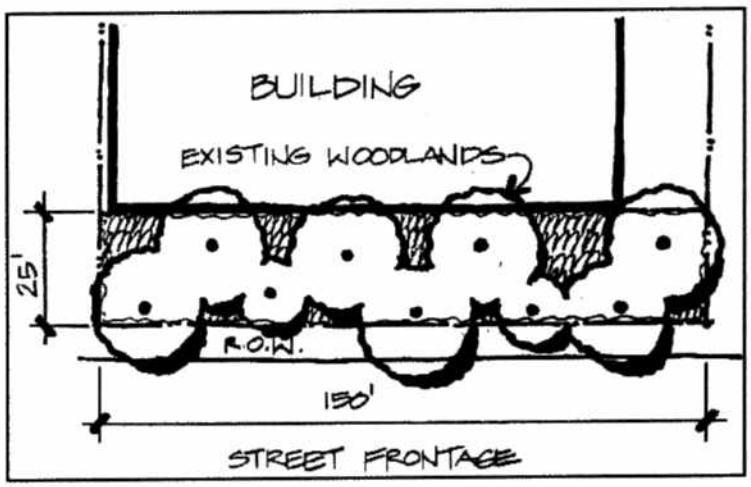

Figure 18-10. Commercial and Industrial Landscaped Strip, Option 3.

Preserve a 25 foot wide strip of existing woodlands in lieu of the landscaping requirement.

c. In the above options, two ornamental trees may substitute for one required shade tree. One shade tree may substitute for five medium shrubs, however shrubs may not be substituted for required trees. (Ord. 99-33, § 1, 8-2-99)

18-10. Residential Landscaping.

All residential developments, except those noted in Section 18-02, shall meet the following requirements for minimum planting and buffering of rear yards from minor collector streets of higher road classifications.

a. Trees in residential subdivisions should be grouped together to simulate natural three stands.

b. Yards, setbacks, and other open space areas within residential developments shall be landscaped with live vegetation. The minimum number of shade and evergreen or ornamental trees to be planted on each lot is a function of the lot size. Table 18-04 specifies the minimum tree requirements.

c. To allow for flexibility and creativity, two ornamental or two evergreen trees may substitute for on required shade tree, Substitutions may be made for up to one half of the number of require shade trees, but in all cases, at least one shade tree must be planted.

Table 18-04 On-Site Residential Planting Requirements.

Residential Type	Minimum Number of Shade Trees	Number of Ornamental or Evergreen Trees	Notes
Single Family or Two Family Development	One (1) per dwelling unit in front yard	One (1) per dwelling unit	One (1) shade tree shall be in the front yard
Multifamily Dwelling Developments	One (1) per 1,200 sq. ft. or fraction thereof of the building footprint		See ordinance for explanation of green area and permissible plant substitutions.

d. When determining the amount of trees required for multifamily dwellings, the following features are not included in the landscape area calculation: lakes and other water features, required parking lot landscaping along a right-of-way, and interior parking lot landscape areas. Figure 18-11 illustrates this calculation.

e. Trees fulfilling the perimeter bufferyard requirements may be counted toward the minimum planting requirements. Existing trees and woodlands may also fulfill part or all of the minimum planting requirements. The existing trees must exceed 2.5 inches in diameter and must be located on an individual lot within 75 feet of a dwelling unit. Ornamental and evergreen trees must still be planted. For any subdivision, existing shade trees larger than 2.5 inches in caliper located on an individual lot or common green area may fulfill part or all of the shade tree requirement for that site.

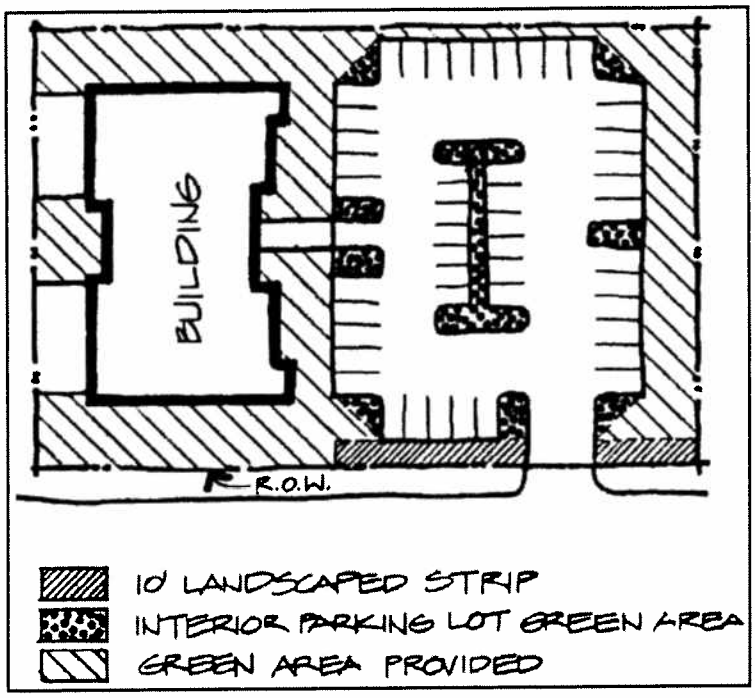

Figure 18-11 Multifamily Dwelling Landscape Area Calculations.

f. The side and rear yards along the perimeter of any residential development (including single family residential, multi-family residential and manufactured housing) must be screened from the view of any street classified as a collector or higher classification street. The buffer is required either on individual lots or as part of the common open space owned and maintained by a homeowners association. Buffer landscaping shall not encroach into the sight triangles (Figure 18-12 at street intersections. Privacy fences, if constructed, shall be on the residential structure side of the lot. The bufferyard shall be a minimum of 20 feet wide and planted with one shade tree, two evergreen trees, and four large shrubs per 15 linear feet of right-of-way. (Ord. 99-33, § 1, 8-2-99; Ord. 02-21, § 5, 6-3-02))

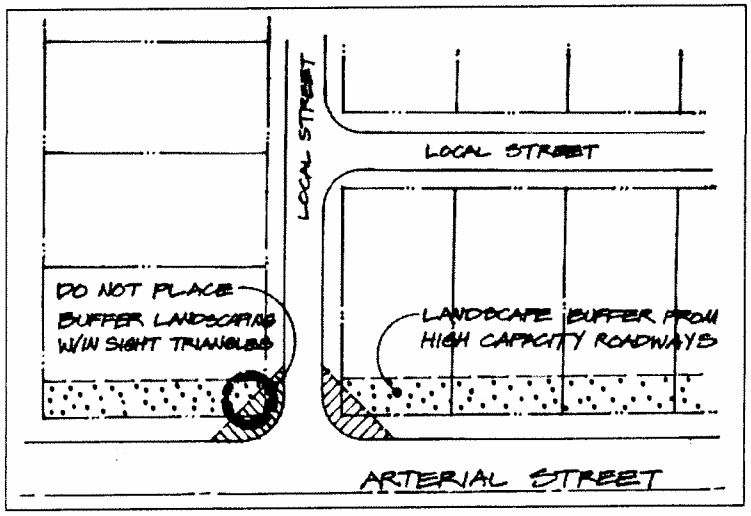

Figure 18-12. Visibility Triangle. (Ord. 99-33, § 1, 8-2-99)

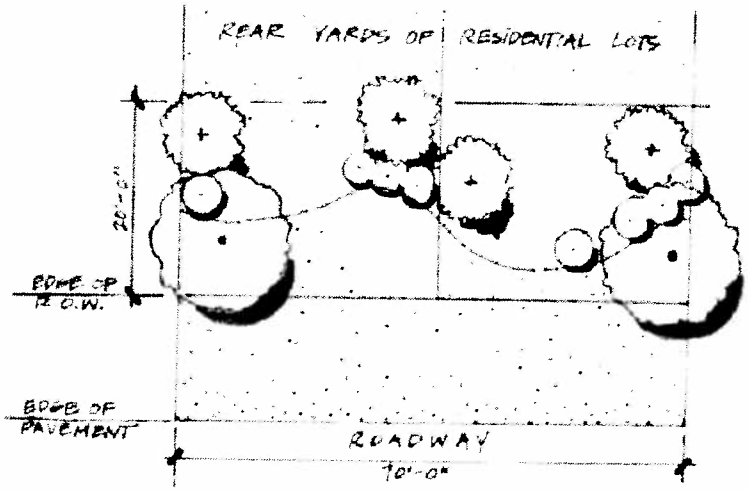

Figure 18-13.Collector, Secondary, Primary, and Arterial Thoroughfare Buffering.
A minimum of 20 feet wide with one shade tree, two evergreen trees, and four medium shrubs per 35 linear feet of right-of-way. (Ord. 02-21, § 6, 6-3-02)

h. If existing woodlands are located entirely in the buffer area, preserving the trees may satisfy all plant requirements. If existing woodlands are partially located within the buffer area, the number of shade trees, evergreen trees, and shrubs may be proportionately reduced. (Ord. 99-33, § 1, 8-2-99)

18-11. Modifications and Waivers.

a. Under conditions where a strict interpretation of requirements may be either physically impossible or create practical difficulties, an alternative compliance procedure may be used to maintain the spirit—rather than the letter—of the law. The proposed solution must equal or exceed standard landscaping requirements. Requests to the Plan Commission for use of alternative landscaping schemes are justified only when one or more of the following conditions apply:

1. The sites involve space limitations or unusually shaped parcels;
2. Topography, soil, vegetation, or other site conditions are such that full compliance is impossible or impractical;
3. Due to a change of use of an existing site, the required bufferyard is larger than can be provided;
4. Safety considerations are involved; and
5. Existing utility lines or easements complicate the placement of required plant materials.

The applicant must provide a justification statement that described which of the requirements established by the Landscaping Ordinance will be met with modifications, which project conditions justify using alternatives, and how the proposed measures equal or exceed normal compliance. The Planning Director will review the alternative compliance application and recommend approval, approval with conditions, or disapproval of the proposal to the Plan Commission, who will make the final decision.

b. Where compliance is required as a result of change in use or expansion of an existing building and compliance with this section will necessitate removal of existing pavement, the Plan Commission may approve a reduction of parking lot setbacks and other minimum planting areas, provided that proposed plantings, screens, and other landscape features are the equivalent to the minimum requirements in terms of landscaping.

c. After initial approval of the landscape plan by the Plan Commission, the Planning Director may approve any substitute landscape proposal that he/she deems to be equivalent to the plan approved by the Plan Commission. As described in 18-11(b), the Plan Director may also allow reduction of the required setbacks or reductions of the landscaping requirements for setbacks, buffer, or parking area when compliance with the landscape standards would require removal of existing pavement.

d. Occasionally, plant substitutions for species specified on approved landscape plans are required due to seasonal planting problems and a lack of plant availability. Minor revisions to planting plans can be approved by the Planning Director if there is not reduction in the quantity of plant material, no significant change in size or location of plant materials, and if the substitute plants are of the same general category and have the same general design characteristics as the plants

originally approved. Proposed materials must also be compatible with the microclimate of the site to ensure healthy plant growth. If the proposed plant substitution doe not fulfill these criteria, then the changes must be submitted to the Plan Commission and reviewed for new approval. (Ord. 99-33, § 1, 8-2-99)

18-12. Installation and Maintenance.

a. Plant materials shall conform to the requirements described in the latest edition of the American Standard for Nursery Stock, which is published by the American Association of Nurserymen, Plants shall be nursery grown.

b. Plants shall conform to the measurements specified below:

1. Caliper measurements shall be taken six inches above grade for trees under four inches in diameter and 12 inches above grade for trees four inches or larger in diameter.

2. Minimum branching height for all shade trees shall be four feet.

3. Minimum size for shade trees shall be 2.5 inches in caliper.

4. Minimum size for ornamental trees shall be 1.5 inches in caliper.

5. Minimum size for evergreen trees shall be 4 feet high.

6. The Plan Commission may impose a condition at the time of development plan approval, that plants be larger at the time of installation, due to surrounding character of neighborhood.

c. After cultivation, all plant materials shall be mulched with a two to three inch layer of shredded bark, peat moss, or another suitable material over the entire area of the bed or saucer, except that required per section 10-10 are not subject to the planting requirement.

d. The owner of the premises shall be responsible for the maintenance, repair, and replacement of all landscaping materials on the premises.

e. All landscape areas shall be kept free of refuse and debris. Fences, walls, and other barriers shall be maintained in good repair.

f. It is the responsibility of each private property owner to remove any dead, diseased, or dangerous trees or shrubs, or parts thereof, which overhand or interfere with line of sight, traffic control devices, public sidewalks, rights-of-way, or property owned by the City. The City shall have the authority to order the removal of any such trees or shrubs.

(Ord. 99-33, § 1, 8-2-99)

18-13. Tables or Approved Plant Materials.

a. The following tables list plant materials approved for specific applications. Divisions were created to represent certain characteristics of the plant materials – height, spread, maintenance, and durability.

b. Trees proposed to meet the parking lot and commercial and industrial landscaping requirements must come from Table 18-5. Trees proposed to meet the bufferyard and residential landscaping requirements may be from either Table 18-5 or Table 18-6.

c. Shrubs proposed to meet the interior parking lot landscaping requirements must come from Table 18-. Shrubs and vines proposed to meet all other requirements of the Landscape Ordinance may come from Table 18-7, Table 18-8, and Table 18-9.

c. Plants used to fulfill the requirements of Article 18 must be selected from the following tables, unless the Plan Commission approved the use of another plant for cause shown.

(Ord. 99-33, § 1, 8-2-99)

Table 18-5

Trees Approved for Planting Along Public Streets and Highways and in Locations Where Low Maintenance, Hardy Specimens with High Canopies are Required.

Botanic Name	Common Name	Type	Height	Tree Category
Acer campestre	Hedge Maple	D	30-40'	Ornamental
Acer Freemanii	Freeman Maple	D	50-60'	Shade
Acer rubrum	Red Maple	D	50-60'	Shade
Acer saccharum	Sugar Maple	D	50-70'	Shade
Carpinus betulas 'Fastigiata'	Upright European Hornbeam	D	30-40'	Ornamental
Carpinus caroliniana	American Hornbeam	D	25-30'	Ornamental
Celtis occidentalis	Hackberry	D	50-75'	Shade
Cercis canadensis	Eastern Redbud	D	20-25'	Ornamental
Crataegus crus-galli	Cockspur Hawthorn	D	15-25'	Ornamental
Crataegus phacnopyrum	Washington Hawthorn	D	20-25'	Ornamental
Fraxinus americana	White Ash	D	45-65'	Shade
Fraxinus pennsylvanica	Green Ash	D	40-50'	Shade
Gingko biloba	Gingko	D	40-60'	Shade
Gleditzia tricanthos inermis	Thornless Honeylocust	D	40-45'	Shade
Koelreuteria paniculata	Golden Rain Tree	D	20-35'	Ornamental
Liquidamber styraciflua	American Sweet Gum	D	40-60'	Shade
Malus hybrids	Flowering Crabapple	D	15-30'	Ornamental
Prunus 'Newport'	Newport Plum	D	15-20'	Ornamental
Prunus maackii	Amur Chokecherry	D	25-30'	Ornamental
Prunus virginiana	Chokecherry	D	20-25'	Ornamental
Pyrus calleryana	Ornamental Pear	D	20-25'	Ornamental
Quercus coccinea	Scarlet Oak	D	60-80'	Shade
Quercus palustris	Pin Oak	D	50-80'	Shade
Quercus phellos	Willow Oak	D	50-70'	Shade
Quercus robur	English Oak	D	50-70'	Shade
Quercus rubra	Red Oak	D	40-60'	Shade
Sorbus alnifolia	Korean Mountain Ash	D	20-30'	Ornamental
Sorbus "Aria"	White Bean Mountain Ash	D	25-40'	Ornamental
Tillia americana	American Linden	D	40-60'	Shade
Tillia cordata	Little-Leaf Linden	D	40-50'	Shade
Tillia tomentosa	Silver Linden	D	40-50'	Shade
Zelkova serrata 'Village Green'	Village Green Zelkova	D	40-60'	Shade

(Ord. 99-33, § 1, 8-2-99)

Table 18-06

Trees Approved for Use within the interior of the site

Botanic Name	Common Name	Type	Height	Tree Category
Acer ginalla	Amur Maple	D	15-20'	Ornamental
Acer palmatum	Japanese Maple	D	15-20'	Ornamental
Amelachier canadansis	Juneberry	D	30-35'	Ornamental
Amelachier gransifloria	Apple Serviceberry	D	25-30'	Ornamental
Amelchier laevis	Allegheny Serviceberry	D	25-30'	Ornamental
Betula nigra	River Birch	D	30-40'	Ornamental
Betula papyrifera	Paper Birch	D	30-40'	Ornamental
Cercidyphyllum japonicum	Katsura Tree	D	25-40'	Ornamental
Cornus kousa	Japanese Dogwood	D	20-25'	Ornamental
Cotinus coggyria	Smoke Tree	D	15-20'	Ornamental
Gymnocladus dioicus	Kentucky Coffee Tree	D	40-50'	Shade
Liriodendron tulipifera	Tulip Tree	D	60-80'	Shade
Magnolia loebneri	Magnolia	D	12-15'	Ornamental
Magnolia soulangiana	Saucer Magnolia	D	15-20'	Ornamental
Magnolia stellata	Star Magnolia	D	10-15'	Ornamental
Picea abies	Norway Spruce	E	50-60'	Evergreen
Picea glauca densata	Black Hills Spruce	E	50-60'	Evergreen
Picea pungens	Colorado Spruce	E	60-75'	Evergreen
Picea pungens 'Glauca'	Colorada Blue Spruce	E	60-75'	Evergreen
Pinus nigra	Austrian Pine	E	30-60'	Evergreen
Pinus ponderosa	Ponderosa Pine	E	40-50'	Evergreen
Pinus strobus	Eastern White Pine	E	50-100'	Evergreen
Quercus alba	White Oak	D	60-80'	Shade
Quercus bicolor	Swamp White Oak	D	40-50'	Shade
Salix blanda	Wisconsin Weeping Willow	D	40-50'	Shade
Salix matsudana 'Tortuosa'	Corkscrew Willow	D	25-30'	Ornamental
Tsuga canadensis	Canada Hemlock	E	60-75'	Evergreen

(Ord. 99-33, § 1, 8-2-99)

Table 18-7

Upright Shrubs Approved for Screening, Hedges, and Specimen Planting

Botanic Name	Common Name	Type	Height
Aronia melanocarpa	Black Chokeberry	D	4-6'
Berberis thunbergii Hybrids	Japanese Barberry	D	3-5'
Buxus microphylla 'Koreana'	Korean Boxwood	E	2-3'
Caragana arborescens	Siberian Peashrub	D	12-15'
Chaenomeles species	Flowering Quince	D	2-6'
Cornus alba 'Elegantissima'	Variegated Dogwood	D	6-10'
Cornus alternifolia	Pagoda Dogwood	D	15-20'
Cornus sericea baileyi	Redtwig Dogwood	D	8-10'
Cotinus coggygrian	Smoke Tree	D	8-10'
Cotoneaster acutifolious	Peking Cotoneaster	D	4-8'
Cotoneaster divaricata	Spreading Cotoneaster	D	5-6'
Euonymus alatus	Burning Bush	D	7-10'
Euonymus fortunei	Euononymous	E	4-6'

Table 18-7, Cont'd.

Upright Shrubs Approved for Screening, Hedges, and Specimen Planting

Botanic Name	Common Name	Type	Height
Forsythia intermedia Hybrids	Hybrid Forsythia	D	7-10'
Forsythia suspense	Weeping Forsythia	D	8-10'
Hamamelis virginiana	Common Witch Hazel	D	10-15'
Hibiscus syriacus	Rose of Sharon	D	4-12'
Hydrangea arborescens 'Annabelle'	Annabelle Hydrangea	D	4-15'
Hydrangea macrophylla 'Nikko Blue'	Nikko blue Hydrangea	D	3-4'
Hydrangea paniculata 'Grandiflora'	Peegee Hydrangea	D	6-10'
Ilex crenata	Japanese Holly	E	3-5'
Ilex meserveae	Blue Holly	E	6-8'
Ilex opaca	American Holly	E	8-15'
Juniperus chinensis	Chinese Juniper	E	6-15'
Juniperus scopulorum	Rocky Mountain Juniper	E	6-15'
Ligustrum amurense	Amur Privet	D	4-8'
Ligustrum 'Vicaryi'	Golden Vicary Privet	D	4-12'
Mahonia aquifolium	Oregon Grape	E	3-6'
Philadelphus coronarius	Sweet Mockorange	D	8-10'
Philadelphus virginialis	Minnesota Snowflake	D	6-8'
Physocarpus opulifolius intermedius	Dwarf Ninebark	D	4-5'
Picea glauca conica	Dwarf Alberta Spruce	E	6-10'
Prunus cistena	Cistena Plum	D	6-8'
Prunus glandulosa	Dwarf Flowering Almond	D	4-6'
Prunus triloba	Flowering Almond	D	8-10'
Rhamnus frangula	Alder Buckthorn	D	12-15'
Rhus aromatica	Fragment Sumac	D	4-6'
Rhus glabra	Smooth Sumac	D	8-10'
Rhus typhina	Staghorn Sumac	D	8-12'
Salix caprea	French Pussy Willow	D	15-20'
Sambucus canadensis	American Elderberry	D	6-8'
Shepherdia argentea	Silver Buffaloberry	D	5-8'
Sorbaria sorbifolia	Flase Spiraea	D	6-8'
Symphoricarpos alba	White Snowberry	D	5-6'
Syringa chinensis	Chinese Lilac	D	6-8'
Syringa hyacinthiflora Hybrids	Hybrid Canadian Lilac	D	8-12'
Syringa vulgaris	Common Lilac	D	8-12'
Syringa vulgaris Hybrids	Hybrid French Lilac	D	8-12'
Taxus cuspidata 'Capitata'	Upright Japanese Yew	E	10-25'
Taxus 'Hicksi'	Hick's Yew	E	10-12'
Thuja occidentalis Hybrids	American Arbovitae	E	4-15'
Viburnum dentatum	Arrowwood Viburnum	D	10-15'
Viburnum lantana	Wayfaring Tree	D	8-15'
Viburnum lantago	Nannyberry	D	8-15'
Viburnum opulus	European Cranberry Bush	D	10-12'
Viburnum placatum tomentosum	Doublefile Viburnum	D	8-10'
Viburnum prunifolium	Black Haw Viburnum	D	10-12'
Viburnum rhytidophyllum	Leatherleaf Viburnum	D	6-15'
Viburnum trilobum	American Cranberry Bush	D	8-12'
Weigela florida	Flowering Weigela	D	4-5'
Weigela vaniceki	Cardinal Shrub	D	4-5'

Table 18-8
Spreading Shrubs Approved for Low Borders, Parking Lot Islands, and Ground Covers

Botanic Name	Common Name	Type	Height
Berberis mentorensis	Mentor Barberry	E	3-4'
Berberis thunbergii Hybrids	Japanese Barberry	D	2-4'
Berberis verruculosa	Warty Barberry	E	2-3'
Buxus sempervirens	Boxwood	E	2-3'
Cotoneaster apiculata	Cranberry Cotoneaster	D	2-3'
Cotoneaster horizontalis	Rockspray Cotoneaster D	D	1-3'
Daphne burkwoodii	Burkwood Daphne	D	3-4'
Duetzia gracilis	Slender Duetzia	D	2-3'
Euonymus fortunei 'Sarcoxie'	Sarcoxie Euonymus	E	3-4'
Forsythia viridissima 'Bronxensis'	Dwarf Forsythia	D	1-2'
Hypericon patulum	St. John's Wort	D	2-3'
Juniperus (spreading varieties)	Juniper	E	1-3'
Mohonia aquifolium 'Compacta'	Dwarf Oregon Grape	E	2'
Microbiota decussata	Siberian Cypress	E	1'
Philadelphus virginialis	Miniature Snowflake	D	2-3'
Picea abies 'Nidformis'	Birdnest Spruce	E	2'
Picea abiew 'Pumila'	Dwarf Norway Spruce	E	2-3'
Picea pungens 'Globosa'	Blue Globe Spruce	E	3-4'
Pinus mugo	Mugho Pine	D	3-4'
Potentilla fruticosa Hybrids	Bush Cinqufoil	D	2-3'
Rhus aromatica 'Low Grow'	Low Grow Fragment Sumac	D	1-2'
Ribes alpinum	Alpine Currant	D	3-5'
Spirea bumalda	Spirea	D	2-3'
Spirea japonica	Japanese Spirea	D	2-3'
Spirea nipponica	Nippon Spirea	D	2-3'
Symphoricarpos orbiculatus	Coral Berry	D	3-4'
Syringa patula 'Miss Kim'	Dwarf Korean Lilac	D	3-5'
Taxus cupidata 'Nana'	Dwarf Japanese Yew	E	2-3'
Taxus media	Spreading Yew	E	2-4'
Thuja occidentalis 'Hetzil Midget'	Hetz Midget Arborvitae	E	2-3'
Viburnum opulus 'Nana'	European Cranberry Bush	D	1-2'

(Ord. 99-33, § 1, 8-2-99)

Sec. 10-473 to Sec. 10-476 Reserved for future use.