

Chapter 22.07. Landscape and Natural Resource Standards

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22.07.01. General Provisions

A. **Purpose.** The purpose of this Chapter is to establish standards for the installation and maintenance of landscaping and buffering, and the protection of natural resources in the City of Waukesha, in a manner that accomplishes the following goals:

1. Enhancement of the City's visual and aesthetic quality.
2. Protection and restoration of the ecological function of the City's natural resources through effective erosion control, tree protection, and buffering of woodland, wetland, and surface water resources.
3. Preservation, maintenance, and installation of high-quality landscaping, trees, and plantings suitable to the City's natural and urban environments.
4. Integration of green infrastructure practices, where suitable to the site, into landscape plantings and buffers.
5. Use of a combination of fencing, walls, and vegetation to provide visual screening functions, while accommodating vegetated biofilters and supporting healthy tree growth.
6. Provision of sufficient quantities of soil to support the health and growth of trees in parking lot landscapes, to provide shade, cooling, and storm water uptake.

B. **Applicability.**

1. **Floodway and Shoreland Wetland Areas.** Development activity within the Floodway, and within any Shoreland Wetlands, shall be exempt from the requirements of this Section 22.07. [See MC Chapter 24, Floodplain Zoning]
2. **Single-family detached, duplex, triplex, and four-plex dwellings:** All single-family All single-family detached, duplex, and triplex dwellings shall meet the minimum landscaping and planting standards in 22.07.02(X).
3. **New development:** All new development subject to site plan and architectural review under Section 22.XX shall meet the minimum landscaping standards in 22.07.XX.
4. **Redevelopment:** With the exception of construction of single-family detached, duplex, triplex and four-plex dwellings, all redevelopment involving exterior construction or land disturbance activity, including the expansion of existing buildings, structures , and surface parking lots, shall be brought into compliance with the provisions of this Section unless:
 - a. The cumulative area of land disturbance in any 10-year period is less than 10 percent of the entire area of the development site; and
 - b. The cumulative increase in building floor area in any 10-year period is less than 10 percent of the total existing floor area; and
 - c. No demolition of any principal structure occurs.
5. **Off-Street Parking Lot Landscaping.** Parking lot landscaping meeting the standards in Section 22.07.XX shall be required in the following instances:
 - a. All new or expanded off-street parking lots containing ten (10) or more parking spaces shall provide landscaping in accordance with this Section, except those serving single-family detached, duplex, triplex and four-plex dwellings.
 - b. **OPTION:** Any new surface parking lot area of any size located along a public right of way or sidewalk shall incorporate at minimum a 3' wide, Type 3 Screen Option or functional equivalent screening [See Section 22.07.XX].
 - c. When 25% or twenty thousand (20,000) square feet or more of an existing parking lot, whichever is less, is reconstructed within a five (5) year period, the entire parking lot shall be brought into compliance with the requirements of this Chapter 22.07. For the purposes of this Chapter 22.07, repaving shall mean activities such as removing the top layer of asphalt through milling and replacing with new asphalt, applying a surface course of new asphalt on top of existing asphalt, or pulverizing and stabilizing existing asphalt. Reconstruction shall mean replacement of the underlying base structure of a parking lot.
 - d. Existing, approved off-street parking lots that are either repaved or reconstructed, but do not meet the area thresholds for full compliance set forth in 22.07.01(B)(5)(c) above, are nonetheless required to take one of the following actions with respect to interior parking lot landscaping:

- i. Replace existing, approved interior lot landscaping with landscape islands or landscape medians meeting the standards for dimensions, tree planting, planting mix, and soil volume and depth set forth in this section; OR
 - ii. Implement new interior landscape islands or landscape medians that cumulatively equal five percent (5%) of the interior area of the parking lot.
 - e. Ordinary maintenance and repairs, including infrared patching, crack filling, seal coating and line striping, shall not necessitate application of the landscaping or screening requirements of this Chapter.
 - f. All new or replaced parking lot landscaping shall meet the standards for dimensions, tree planting, planting mix, and soil volume and depth set forth in this Chapter. Required tree planting may be varied or waived by the Zoning Administrator upon finding [by the City Arborist] that site conditions or planting area sizes are not likely to lead to successful establishment and growth of a canopy tree.
- C. **Groundcover Required.** All areas of any lot not covered by buildings or paving shall be planted with landscaping or groundcover, as follows:
- 1. Open areas of any lot not covered by formal landscape plantings shall be planted with deep-rooted plantings (which may include native short-stature grasses or native forbs), grasses, low growing ground cover, or other landscape materials, except where existing natural vegetation of the site or other condition makes such plantings impossible.
 - 2. Quality planting soil shall be provided for any such plantings, with a minimum depth of three (3) inches of soil.
 - 3. Use of turfgrass and sodded lawns limited.
 - a. The use of turfgrass and sodded lawns generally shall be limited to use in areas where passive or active recreation reasonably may be expected, high-traffic pedestrian areas, and perimeters or edges where frequent mowing is required to maintain landscape appearance and function.
 - b. For all other site areas, to enhance ecological function, drought resistance, and stormwater infiltration, a mix of trees, shrubs, native plants, forbs, and grasses, or at minimum grass or sod planted with a supplemental layer of planting soil to improve growth and infiltration shall be utilized.
 - c. The use of low-growing ground cover on slopes to provide stabilization and where appropriate, pollinator habitat, is encouraged.
 - 4. Any other areas of the site where vegetation is not planted shall be fully and permanently stabilized with mulch, rock, erosion control, or other durable groundcover sufficient to prevent erosion and airborne dust.

- D. **Definitions and Measurement.** For purposes of this Chapter, the following definitions and measurements shall apply:
1. Tree requirements shall refer to the caliper at planting or diameter at breast height (DBH), as applicable.
 2. Planting Types; measurement. The following definitions shall apply:
 - a. Canopy tree
 - b. Evergreen/coniferous tree
 - c. Ornamental tree
 - d. Large deciduous shrub
 - e. Large evergreen shrub
 - f. Forbs or grasses
 - g. Groundcover
 - h. Bioretention planting

22.07.02. Preservation of Topography; Stockpiling; Land Disturbance

- A. **Purpose.** This Section 22.07.02 establishes conditions for managing excavation and filling, land disturbance, and stockpiling, in order to preserve natural topography, protect against dangers and damage from man-made topographical changes, protect water quality through the application of sound erosion control principles, and prevent unsightly and hazardous exposed earth.
- B. **Permit required.**
- C. **Minimum and Maximum Parking Space Standards.**
- D. **Administrative Adjustments.**
- E. **Parking Space and Drive Aisle Dimensional Requirements.**
- F. **Parking Improvement and Maintenance Standards.**

22.07.03. General Landscaping Standards

- A. **General Principles.** In general, the following principles shall be applied to the design of required landscaping:
1. The retention of existing trees of species valuable to the City's urban forest, and measures to ensure their continued health and growth, should be prioritized in site and landscape design.

2. A diverse mix of canopy trees from the City's [DOES ARBORIST HAVE ONE recommended Street Tree] list should be incorporated into landscape plans.
3. Larger perimeter landscaping areas and larger internal landscaped islands providing greater soil volume, larger vegetated area, and greater capacity for managing storm water runoff are to be prioritized over multiple, distributed and smaller islands or strips.
4. The total anticipated canopy area of a tree or trees at maturity shall be prioritized over the total number of trees planted.
5. Designs of screening, buffer, and transitional area landscaping that incorporate ecological benefits, a variety of plantings, or stormwater management shall be balanced with the goal of providing visual opacity and screening. Design approaches that combine fencing, plantings and other features to provide greater opacity shall be prioritized over continuous hedges or masonry walls in landscaped areas where ecological benefit or storm water management are achieved.
6. Physical Containment of Landscaped Areas.
 - a. All landscaped areas located within or adjacent to a parking lot, or adjacent to a public street, or sidewalk shall be designed to contain landscape materials and to prevent vehicular encroachment through use of concrete curbing, headers, wheel stops, or other appropriate barrier, which may be interrupted to allow stormwater inflow.
 - b. The use of a strip of grass or other sturdy, salt-tolerant vegetation at the edge of planting areas and vegetated stormwater management areas may be used to ensure a neat appearance, contain mulch, and protect the planting areas from impacts of snow plowing, de-icing treatment, and vehicles.
7. The use of sturdy, all-weather planting containers shall be considered as a means to meet the purpose and intent of these standards for existing parking lots, and on development sites where site and soil conditions preclude in-ground landscaping. The use of salt-tolerant species is strongly recommended in all parking lot landscaped islands and perimeter areas.
8. Water-efficient irrigation sufficient to maintain plant health through dry periods should be used where needed to support landscape health and maintain vegetated stormwater management areas
9. Species of plantings engineered for high traffic areas shall be placed in the highest vehicular and pedestrian traffic areas. Native species of canopy/shade trees generally shall be placed away from the highest vehicular and pedestrian traffic areas.
10. Fruit, nut, or seed-bearing trees generally shall be located away from parking/drive areas and pedestrian walkways.
11. New vegetation should be selected, planted, and maintained so that at maturity it will not interfere with utility lines, snow storage areas, vehicular parking, pedestrian circulation,

traffic sight visibility at driveways and street intersections, and will not cause damage or upheaval of sidewalks and pavement.

B. Plant Material Standards.

1. All installed landscape shall conform to the most recently approved American Standard for Nursery Stock (ANSI Z60.1), published by the American National Standards Institute.
2. All vegetation shall be functionally appropriate to the area in which it is planted. The use of species from the City's Recommended Plant Species list is strongly encouraged.
3. In no case shall any invasive species, noxious weeds, or other species of vegetation precluded by ordinance or guidance of the City of Waukesha be planted, retained, or counted towards any landscaping required by the Municipal Code.
4. Any forestation, reforestation, or landscaping shall utilize a variety of tree and plant species suitable for local climate conditions. In general, no single species shall comprise more than 30 percent of the plantings of its type (i.e., tree, shrub, forb/grass, or groundcover)
5. No species currently under disease epidemic, as determined by the Wisconsin Department of Natural Resources, shall be used.
6. Plantings shall be of a quality consistent with the species standards established in the Approved American National Standard of the American National Standards Institute (ANSI).
7. Artificial Landscape Materials not Permitted. Artificial trees, shrubs, turf, or plants shall not be permitted as landscaping. [NOTE: SOME COMMUNITIES ALLOW ARTIFICIAL TURF AS LANDSCAPING]
8. Landscape Fabric Recommended. The use of landscape fabrics under all areas landscaped with non-living materials, except where contra-indicated within stormwater management areas, is recommended to prevent weed growth.

C. Irrigation.

1. Appropriate on-site, outdoor water supply (e.g. underground or drip irrigation, hose bibbs, etc.) that provides complete coverage to all new living landscaped areas for a period sufficient to provide for plant establishment is required.
2. In no case shall normal irrigation result in runoff onto paved surfaces, sidewalks, or streets.
3. Watering systems shall be designed to water landscaped areas efficiently. Hose bibbs, if used, must be located within one hundred (100) feet of any landscaped area.
4. Temporary or permanent irrigation of vegetated stormwater management measures and native planting areas shall be implemented per an approved stormwater management plan, or as specified by a landscape architect on the approved landscape plan. Where permanent irrigation is not specified, temporary irrigation of installed stormwater plantings shall be

provided for a period of 18 months following installation, or as specified in approved landscaping and stormwater management plans.

D. Minimum Planting Area Dimensions and Soil Volume Required.

1. All areas of any lot to be vegetated shall be provided with quality planting soil with a minimum depth of three inches (3"). Additional planting depth, specific soil volumes, or specific soil types may be required where specified in an approved landscaping plan or stormwater management plan.
2. Minimum surface area per tree required.
 - a. Each tree planted in accordance with the requirements of this Chapter shall be planted within a minimum permeable surface area of one hundred fifty (150) square feet.
 - b. Multiple trees may be planted in a single, contiguous landscaped area provided a minimum of one hundred fifty (150) square feet of surface area per canopy/shade tree, one hundred (100) square feet of surface area per evergreen and ornamental tree, and the total soil volume required under Table 22.07.XX for all trees, are provided.
 - c. All trees shall be planted in a location or structure providing the minimum soil volume and planting area dimensions per tree in Table 22.07.XX. A minimum planting depth of three feet (3') shall be required per tree unless this requirement is specifically waived as part of an approved landscaping plan or stormwater management plan.

Table 22.07.01 Minimum Tree Planting Soil Volume

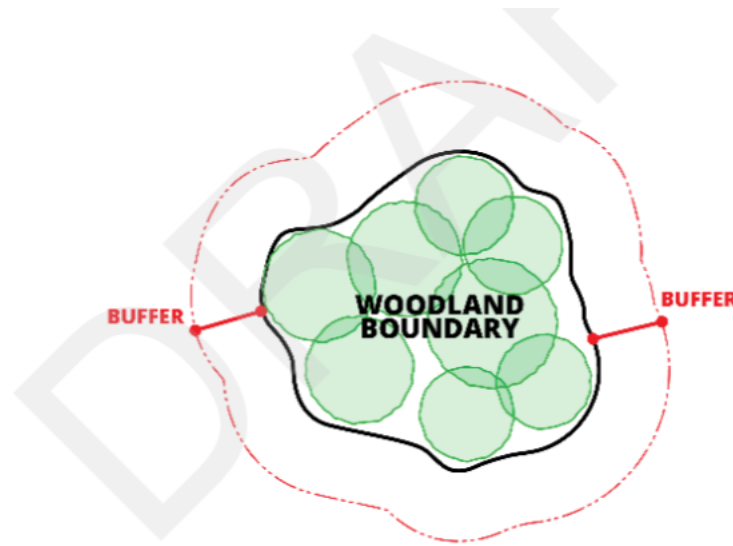
Expected Tree Height at Maturity	Minimum Planting Soil Volume Required		Sample Planting Area Dimensions @ 3' depth	
	Cubic Feet	Cubic Yards	Length	Width
Less than 25'	400 CF	14.8 CY	11.5'	11.5'
25' to 40'	800 CF	29.6 CY	16.3'	16.3'
Greater than 40'	1,200 CF	44.4 CY	20'	20'

22.07.04. Tree Preservation

- A. **Purpose and Intent.** It is the policy of the City of Waukesha to preserve the natural forest and woodland areas in the City. With respect to specific site development, the retention of tree stands should be emphasized as set forth in Section 22.07.03(C).
- B. **Clearing and cutting restricted.**
1. No clear cutting of woodland areas shall be permitted in [WHICH DISTRICTS RS-1, RS-2, and RS-3 residential districts].
 2. Clear cutting in other districts, or removal of topsoil, shall be permitted by conditional use permit only as set forth in Section 22.07.02.
- C. **Preservation of individual large trees required.**
1. [ON WHAT SITES? ALL SITES?] Deciduous shade trees five inches (5") or greater in caliper and coniferous trees ten feet (10') or greater in height shall be preserved unless it is demonstrated to the satisfaction of the Plan Commission that preservation of the tree will result in any of the following:
 - a. Hazardous or unsafe conditions
 - b. Shading or other interference with the installation and operation of renewable energy
 - c. [current language: unduly restrict development of the site]
 2. Replacement required.
 - a. [PROPOSED - FOR CONSIDERATION] The clearing of deciduous trees with a caliper five inches (5") or greater and coniferous trees ten feet (10') or greater in height shall require a permit from the Zoning Administrator. [SHOULD REPLACEMENT BE REQUIRED?]
 - b. All deciduous trees five inches (5") or larger in caliper or ~~coniferous~~ EVERGREEN trees ten feet (10') or greater in height destroyed during the development process which were not identified for destruction in the approved landscape plan shall be replaced with species of comparable or greater resource value as determined by the City Arborist.
 3. [DOES WAUKESHA WANT TO HAVE MORE DETAILED STANDARDS?]
- D. **Protection of Woodlands.**
1. It is the policy of the City of Waukesha to protect woodland areas with stands of mature trees.
 2. For purpose of this Chapter, a protected woodland shall be defined as an area or stand of trees with a minimum of eight (8) or more individual trees having a DBH of at least five inches (5"), whose combined canopies cover at least fifty percent (50%) of the area with the outside perimeter of the area or stand of trees.

3. A protected woodland shall be defined using the perimeter of the canopies during full leaf-on.
4. For any protected woodlands, a buffer line shall be identified at thirty feet (30') from the perimeter of the defined woodland, as shown in Figure 22.07.01.

Figure 22.07.01 Woodland Buffer



5. Preservation of a protected woodland shall count towards required landscaping points on a site using the formulas and standards in Section 22.07.05 based on the number of trees preserved, and any supplemental credit applied under the provisions of 22.07.05(A)4)(e).

22.07.05. Required Plantings

A. Total Plantings Required.

1. Required landscaping shall be calculated based upon the total developed area of the property subject to an application. Total developed area, for purposes of this Chapter, shall be that area of the property in square feet which is planned to be occupied by any building or other impervious surface area.
2. **Minimum landscaping for single-family, two-family, triplex, and four-plex residential.**
 - a. Single-family, two-family, triplex and four-plex residential structures shall require the following minimum landscaping:
 - i. Permanent vegetative groundcover, as set forth in Section 22.07.01(C), shall cover all areas not occupied by buildings, driveways, walkways, patios, or other impervious areas, except where alternative stabilization is approved by the Zoning Administrator under 22.07.01(C)(1) and (4).

- ii. One (1) deciduous or evergreen tree per three thousand (3,000) square feet of lot area; or one (1) ornamental tree per two thousand (2,000) square feet of lot area. Where a partial number of trees would be required for a lot, the required number of trees shall be rounded [UP? I WOULD RECOMMEND DOWN] to the nearest whole number.
- b. All planted areas and all tree planting shall meet the standards of Section 22.07.04(D) and Section 22.07.03(D) for surface planting area and soil volume, as applicable.
- c. **Natural Lawns and Rain Gardens Permitted.** Front yards may be planted as natural lawn areas or rain gardens, with a combination of native plants, forbs, and grasses exceeding six inches (6") in height, provided the following standards are met:
 - i. All natural lawn areas or rain gardens shall be selected from [RECOMMENDED PLANT LIST] and shall not include any weeds, invasive species, or noxious weeds.
 - ii. All natural lawn areas or rain gardens shall be clearly demarcated with well-maintained edging, groundcover, mowing, or sturdy fencing.
 - iii. All natural lawn areas or rain gardens shall be set back a minimum of two feet (2') from front yard lot lines, and a minimum of two feet (2') from side yard lot lines within a required front setback.
 - iv. In no case may a natural lawn area or rain garden create a visual obstruction within any required sight triangle.
 - v. Notwithstanding any provisions of this section, in the event a natural lawn area or rain garden creates a nuisance condition, the enforcement provisions of MC [REF] shall apply.
- 3. **Minimum Landscape Points Required for All Other Land Uses.** For any other application subject to [EQUIVALENT OF SITE PLAN AND ARCHITECTURAL REVIEW], the following minimum landscape points, as set forth in Table 22.07.03, shall be required:
 - a. For the first five acres (5 ac.) of lot area, five (5) landscape points shall be required for every two hundred fifty square feet (250 SF) of total developed area.
 - b. For all additional lot area, one (1) landscape point per one hundred square feet (100 SF) of total developed area.

Table 22.07.02 Example Calculation of Required Landscape Points

Example Application	First Five Acres of Lot Area (5 points per 250 SF)	Additional Lot Area (1 point per 100 SF)	Total Landscape Points Required
10,000 SF total developed area, 1 acre site	$(10,000 \text{ SF}) / (250 \text{ SF}) \times 5$ points = 40 x 5 = 200 points	None	200

80,000 SF total developed area, 6 acre site	$(80,000 \text{ SF}) / (250 \text{ SF}) \times 5 \text{ points} = 320 \times 5 = 1,600 \text{ points}$	$(80,000 \text{ SF}) / (100 \text{ SF}) \times 1 = (800 \times 1) = 800 \text{ points}$	$1,600 + 800 = 2,400 \text{ points}$
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Table 22.07.03 Landscaping Points

Landscaping Type	Points	Minimum Size at Installation	Notes
Canopy tree (deciduous)	40	1 ½ " DBH	Trees from recommended species list
Tall evergreen tree (e.g. spruce, pine, etc.)	30	6'	
Ornamental tree	15	1" caliper	
Upright evergreen shrub (e.g. Arborvitae, etc.)	10	4'	
Evergreen or large deciduous shrub	4	24" height	
Small flowering shrub	3	18" height	
Native grasses/forbs	3		
Bioretention plantings	3	3" – 4" pots or as specified in SW management plan	9 SF of planted bioretention area = 3 points
Ornamental/decorative fencing or wall along a public right-of-way	3 per 10 linear feet	Per buffer/ screening standards in 22.07.XX	
Landscape furniture or public art feature, Downtown District	5 points per 'seat' or SF of surface area of art feature	Furniture or art must be within developed area, be publicly accessible, and comprise no more than 5% of total required points. Public art features require Plan Commission approval.	
Conservation of canopy tree, <5" DBH, tall evergreen tree, <10" DBH, or ornamental tree	6 per caliper-inch of DBH	Maximum 150 points per tree; conserved tree must be protected throughout construction in accordance with Section 22.07.06(X).	
Conservation of canopy tree, 5" or greater DBH	10 per caliper-inch of DBH		
Conservation of tall evergreen tree, 10" or greater DBH			
Conservation of large deciduous or evergreen shrub, 5' height or greater	4	Maximum of 20% of points from conserved shrubs	

4. Credit for Preservation of Existing Trees and Plantings.

- a. Preservation of existing trees and shrubs, where explicitly approved by the Zoning Administrator or Plan Commission, may be credited towards required landscaping points in accordance with Table 22.07.03.
- b. Existing trees to be credited shall be protected throughout the construction process with sturdy fencing and demarcation at the drip line. Existing shrubs and other vegetation to be credited shall be protected with sturdy fencing and demarcation providing a buffer of a minimum of 24" from all disturbance and construction activity.
- c. Plantings to be preserved shall be shown on the submitted landscape plan, including exact location, size and type, and shall be noted in a table.
- d. The City Arborist may be consulted to determine the likelihood of survival of canopy/shade, evergreen, and ornamental trees through construction.
- e. Where preservation of areas of existing vegetation or trees is proposed that provides substantial aesthetic, buffering, or environmental value, the Zoning Administrator or Plan Commission may approve an alternative credit towards the requirements of Table 22.07.03.

5. Alternative Minimum Standard.

- a. Where strict application of the landscape points requirements of Table 22.07.03 is infeasible due to unique site or building conditions, the Zoning Administrator or Plan Commission may approve a landscaping plan provided the monetary value of plantings provided meets or exceeds the following:
 - i. In the [DOWNTOWN] district, a landscaping budget must be equal to or greater than 1% of all construction costs
 - ii. In all other districts, a landscaping budget must be equal to or greater than 3% of the first \$250,000 of all construction costs plus 1% of the next \$250,000 of construction costs over \$250,000.
- b. A landscaping budget prepared for conformance with these requirements shall include unit costs of proposed plant materials only. Ancillary costs including but not limited to the cost of mulch, soil, site preparation, lighting, or irrigation shall not be counted towards this requirement.
- c. A landscaping budget prepared for conformance with these requirements shall be prepared and signed by a landscape architect or landscape professional and shall be subject to review and approval by the City.

B. Canopy Tree Species Diversity Requirement for New Trees. The following requirements for canopy tree species diversity shall be met when new trees are planted or proposed in a landscape plan:

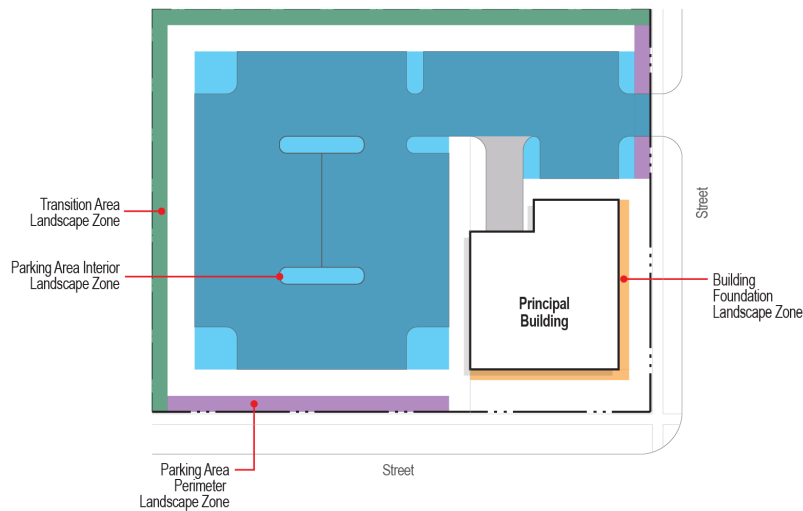
1. For landscape plans with fewer than five (5) new canopy trees, no species diversity is required.
 2. For landscape plans with five (5) to fifty (50) new canopy trees, no single species may comprise more than thirty-three percent (33%) of new trees.
 3. For landscape plans including subdivision plans with more than fifty (50) new canopy trees, no single species may comprise more than twenty percent (20%) of new trees.
- C. Groundcover required. All areas not covered by buildings, paving, or formal landscape plantings shall be covered with landscaping materials conforming to the standards of Section 22.07.01(C). The specific type(s) of groundcover to be used shall be shown on the landscape plan.

22.07.06. Required Planting Zones

A. Planting Zones Established.

1. Landscaping required under Section 22.07.05 shall be distributed among the following areas:
 - a. Building foundation and parking lot planting zones set forth in this Section 22.07.06
 - b. Buffering and screening as set forth in Section 22.07.07,
 - c. Screening of utilities, as set forth in Section 22.XX.XX [SITE IMPROVEMENTS]
 - d. Vegetated stormwater management measures installed in accordance with an approved stormwater management plan, and
 - e. Plantings supplemental to woodland, surface water, or wetland buffers as set forth under Section 22.07.08.
2. Notwithstanding the plant points requirements of Table 22.07.03, in no case shall any site with ten (10) or more off-street parking spaces or five thousand square feet (5,000) of total developed area provide less than the minimum requirements for perimeter and interior parking lot landscaping in Section 22.07.06(C) and required buffer yard or screen plantings in Section 22.07.07.
3. A Landscaping Plan shall be submitted in accordance with Section 22.07.09. Each Landscaping Plan shall include a table indicating, as applicable, the size at planting, number, and types of plantings proposed by zone, and the total points value as set forth in Table 22.07.03.
4. Figure 22.07.02 illustrates the general location of planting zones required to be planted in accordance with the standards in this Section 22.07.06. The requirements of each planting zone are cumulative; no planting shall be counted towards meeting the requirements for planting in another required zone, unless explicitly approved by the Zoning Administrator or Plan Commission, as applicable.

Figure 22.07.02. Required Planting Zones



B. Building Foundation Planting Zone.

1. The objective of building foundation landscaping is to soften the base of the building, add visual interest, and integrate the building with the site
2. Building foundation landscaping shall be provided along eighty percent (80%) of the total building facade, unless an alternative design is approved by the Plan Commission.
3. Foundation landscaping shall consist of a combination of shrubs, forbs, grasses, groundcover, and trees. Plantings shall be designed to enhance architectural features and visually soften long expanses of walls.
4. Where the planting soil and surface area requirements of Section 22.07.03(D) can be met, trees generally shall be planted at a minimum spacing of one (1) tree per fifty linear feet (50 LF) of building facade. Where specifications and designs are approved by the City Engineer or City Arborist, trees may be planted in structural soils or manufactured structures such as tree boxes.
5. **Minimum dimensions**
 - a. Where a building foundation abuts a sidewalk or other hardscape for use by pedestrians, foundation planting zones should be a minimum of eighteen inches (18") in width
 - b. Where a building foundation abuts a landscaped area, a minimum depth of five feet (5') shall be provided, unless an alternative design is approved by the Zoning Administrator or Plan Commission. However, in no such case shall the depth of the planting area be less than three feet (3').

6. Integration with Stormwater Management. The integration of stormwater management infrastructure, including measures such as planter boxes or bioretention areas, may be used to meet this standard in conjunction with an approved Stormwater Management Plan.
7. The Zoning Administrator may modify this requirement so long as improvements achieve an equivalent or greater level of landscaping for the site.

C. Parking Lot Planting Zones; General Standards

1. The objective of parking lot planting zones is to provide screening between off-street parking areas and rights-of-way, and to facilitate the integration of stormwater management with required landscaping.
2. **Integration of stormwater management measures.**
 - a. The integration of stormwater infrastructure, including vegetated measures such as bioretention areas and stormwater trees, may be used to meet the planting requirements for any parking lot planting zones in conjunction with an approved Stormwater Management Plan.
 - b. Sufficient protection of vegetated stormwater management areas, including but not limited to wheel stops, curbing, mowed edges, fencing, or sturdy perimeter plantings, shall be incorporated to ensure protection of the stormwater management functions of the planted area.
3. **Protection from vehicle overhang.** All planted areas adjacent to parking stalls shall include wheel stops, curbing, or other effective barriers to prevent vehicle trespass into landscaped areas. Planting designs incorporating turfgrass, durable groundcover, or other durable edging are encouraged to reduce damage from vehicle overhang.
4. **Snow storage areas.**
 - a. Snow storage areas shall be clearly indicated on all site plans and landscaping plans.
 - b. The use of vegetated areas for snow storage shall be limited strictly to areas designated, planned, and planted for this purpose.
 - c. Snow storage in stormwater management measures is strictly prohibited except where specifically approved by the City Engineer as part of an approved stormwater management plan.
5. **Standards for Parking Lot Planting Zones**
 - a. All parking lot planting zones shall be planted with a mix of living ground cover, shrubs, and mulch or other ground cover meeting the standards of this Section 22.07.06(C), sufficient to fully cover the ground surface and prevent the growth of weeds.

- b. No more than ten percent (10%) of the surface area of any parking lot landscape zone may be non-living material, and no more than twenty-five percent (25%) of the surface area of any parking lot landscape zone may be turf grass.
- c. A minimum soil depth of three feet (3') shall be provided in each planting zone where a tree is planted. The soil volume and surface area standards of Section 22.07.03(D) shall be met for all planting areas.

6. Additional materials, fencing, and masonry walls permitted.

- a. The use of landscape boulders, split-rail fencing, or other natural or simulated natural materials is permitted to add visual interest and enhance screening.
- b. Where fencing or masonry walls are incorporated into a parking lot planting zone, the maximum height of any fencing or walls shall not exceed three feet (3'), unless approved in conjunction with required screening under Section 22.07.07.
- c. Plantings shall be used to soften the visual effect of any continuous fencing installed.
- d. Fences or walls shall not be located in any portion of the planting area where vehicle overhang is reasonably foreseeable.

D. Minimum Area and Dimensions of Parking Lot Planting Zones

- 1. Parking lot perimeter planting zones shall meet the minimum dimensional standards of Subsection (E) below.
- 2. Interior parking lot landscaping in the form of medians islands, or 'end caps,' shall be required for all off-street parking areas with twenty (20) or more contiguous parking spaces. Where interior parking lot landscaping is required, the total surface area of medians, islands, and end caps shall be a minimum of ten percent (10%) of the area of the impervious area of the off-street parking lot, including all parking stalls, driveways, and drive aisles.
- 3. In general, larger perimeter planting zones and medians are favored over smaller, dispersed islands and end caps. For off-street parking areas with twenty (20) or more contiguous parking spaces, up to twenty-five percent (25%) of the required interior parking lot landscaping may be added to perimeter zone landscaping areas.

E. Standards for Parking Lot Perimeter Planting Zones.

- 1. Parking area perimeter zones shall be provided wherever off-street parking lots abut a public right-of-way, excluding alleys.
- 2. **Required width.**
 - a. In the [DISTRICTS]: Parking area perimeter zones shall be a minimum of ten feet (10') wide, measured from the back of curb or edge of the off-street parking area to the curb or edge adjacent to the adjacent property line, sidewalk, or street.

- b. In the [DOWNTOWN DISTRICTS], parking area perimeter zones shall consist of a Type 1, Type 2, or Type 3 Screen as set forth in Section 22.07.07(E)(1) through (3).

3. Minimum plantings required.

- a. Unless designed in conjunction with an approved stormwater management plan, parking area perimeter zones shall include a minimum of one shrub or native forb/grass per three (3) linear feet of landscaped area length, and one ornamental or canopy tree per twenty-five (25) linear feet of landscaped area length.
- b. Shrubs, forbs, and grasses shall be spaced horizontally per the approved landscaping plan but shall be arranged to provide, at maturity, a continuous planted area with effective visual buffering of the surface parking area.

- 4. **Minimum height.** Plantings generally shall be designed to achieve an average minimum height of thirty inches (30") and no more than four feet (4').

F. Standards for Interior Parking Lot Planting Zones.

- 1. Interior parking lot planting zones shall consist of a mix of medians, islands, and 'end caps,' as illustrated in Figure 22.07.03.

Figure 22.07.03 Interior Parking Lot Planting Zones

[IF NEEDED?]

2. Placement.

- a. Landscape medians shall be located between every other bay of parking in any lot with more than two (2) parallel bays and more than forty (40) parking spaces. A parking bay shall be defined as one (1) or two (2) rows of parking spaces accessed from a single drive aisle.
- b. Landscape islands or 'end caps' shall be provided at the end of each parking row and within rows or parking spaces so that there are no more than twenty (20) consecutive parking spaces without a landscape island.
- c. 'End caps' without plantings, which shall not count towards landscaping required by this Chapter, may be utilized where appropriate for safe and efficient circulation.

3. Required Dimensions.

- a. Landscape medians shall be a minimum of ten feet (10') wide. Where a sidewalk or pedestrian passage along or through the landscape median is included, the width shall be increased to ensure a planting area of a minimum of ten feet (10') in width.
- b. Landscape islands and planted 'end caps' shall be a minimum of ten feet (10') wide and eighteen feet (18') long.

- c. 'End caps' without planting may be any dimension appropriate to efficient and safe circulation.

4. Minimum plantings.

a. Trees.

- i. Except where the requirements for soil volume and depth in Table 22.07.01 cannot be met due to dimensional or site conditions, or where an individual landscape island, planted end cap, or median is designed as part of an approved stormwater management plan, one (1) ornamental or canopy tree shall be planted per one hundred eighty square feet (180 SF) square feet of contiguous surface area in each landscape island and landscape median.
- ii. In no case shall a tree be planted in a landscaped zone, other than a "tree box" or other proprietary tree planting system, with a dimension of less than thirty square feet (30 SF), unless specifically approved by the Zoning Administrator.

b. Trees; waiver for adverse site conditions.

- i. Where in the opinion of the City Arborist site conditions beyond the applicant's control are likely to prevent successful tree establishment and growth, one or more required tree(s) may be planted in the perimeter parking lot landscape zone, provided all surface area and soil volume requirements of Section 22.07.03(E) are met.
- ii. Should the available perimeter parking lot landscape zone be insufficiently sized to meet the surface area and soil volume requirements, a fee-in-lieu of planting the required trees may be paid to the City in accordance with Section 22.07.08(X).

- c. **Shrubs and forbs/grasses.** Except where planted in accordance with an approved stormwater management plan, each landscape island, planted end cap, and median include a minimum of one shrub or native forb/grass per three linear feet (3 LF) of planting zone length.

22.07.07. Buffering and Screening Zones

A. Purpose. It is the purpose of this section to provide a variety of options for establishing effective and attractive buffering and screening zones between land uses, and between land uses and the public right-of-way, in order to maintain compatibility among and between adjacent land uses, provide privacy and sound attenuation, and promote a high-quality visual environment throughout the City of Waukesha.

B. Applicability.

- 1. Screening may be required pursuant to Section [SITE PLAN STANDARDS] or incorporated into a required landscaping zone pursuant to Section 22.07.05.

2. Credit towards required landscaping points; supplemental planting may be required.

- a. Plantings within a buffering and screening zone generally shall be credited towards the required landscaping points in Table 22.07.03.
- b. Where, in the judgment of the Plan Commission or Zoning Administrator, site conditions or the intensity of a proposed use require more planting or screening than would otherwise be required under this Chapter in order to prevent adverse impacts on the public right-of-way, environmental resources, or neighboring properties, the Plan Commission or Zoning Administrator may require screening and buffer plantings be provided in addition to landscaping meeting the requirements of Table 22.07.03.

C. General Standards for Buffering and Screening Zones

1. Screens, walls, and berms located along front and corner side yards are limited to four feet (4') in height, or as found in the General Development Standards [REFERENCE]
2. Buffering and screening zones may be crossed by driveways, roads, sidewalks, trails, and utility lines, including necessary risers and boxes, serving the development. The width of these crossings shall be minimized to the extent practicable.
3. Buffers may include approved retaining walls, landscape planters, impervious surfaces incidental to runoff and erosion control measures; and sculptures or other art works.
4. The surface area and soil volume requirements of Section 22.07.01(D) shall apply to all planted and landscaped areas implemented in accordance with this Section.
5. [POLICY OPTION]: No buildings, including accessory structures, shall be allowed within the screening buffer.
6. Where a vehicle turn-around, loading area or parking area will be located adjacent to the screening buffer, the screening buffer shall be expanded horizontally and supplemented with additional fencing and vegetation as needed to be opaque year-round.
7. Woodland areas required to be conserved under Section 22.07.04(D) may be counted towards a required screening buffer if, in the judgment of the Zoning Administrator or Plan Commission, the implementation of additional fencing or evergreen plantings is consistent with maintenance of the area as a protected buffer and screening zone.
8. Land within required woodland or surface water and wetland buffers shall not constitute a screening buffer for purposes of this section; however, provided required fencing and plantings are provided on land outside a surface water or wetland buffer, the portion of the surface water or wetland buffer adjacent to the planted area may be utilized to meet the horizontal setback requirements of this Subsection.

Figure 22.07.04. Screening with Woodland, Surface Water, or Wetland Buffers

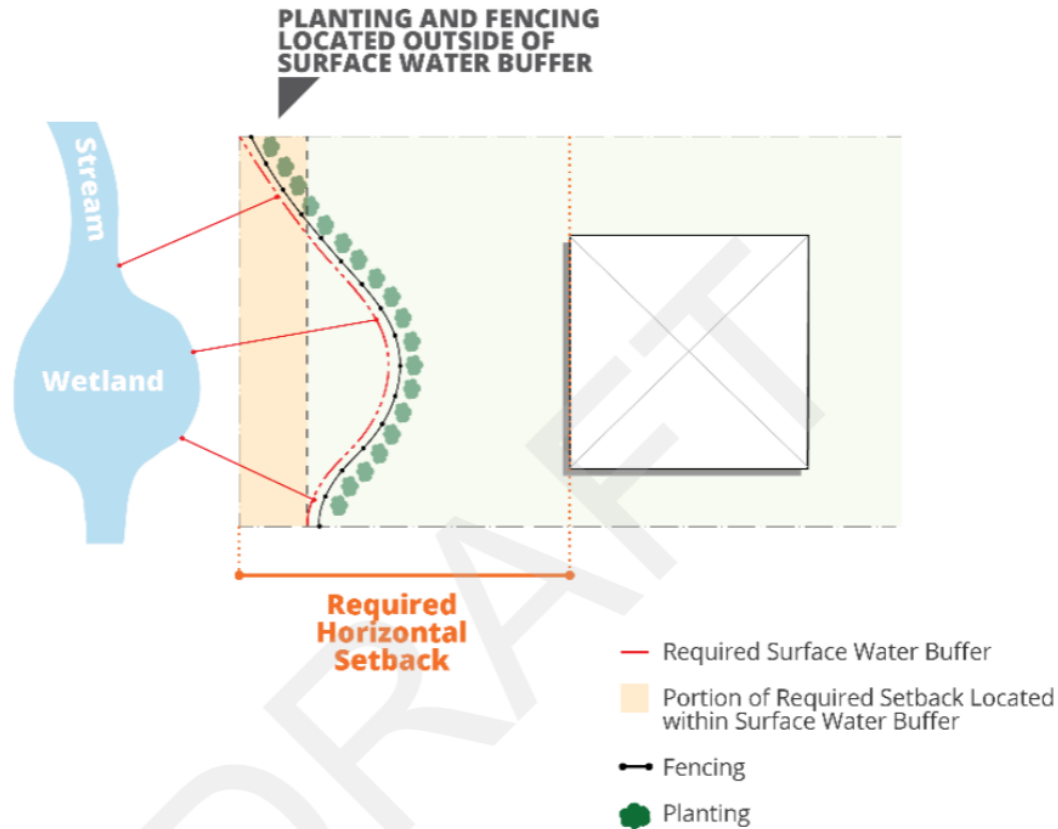


Figure 4 Forested Land or Wetland – Water Setback

9. Stormwater management measures may be located within a required screening buffer upon approval of a Stormwater Management Plan under MC Chapter 32 if, in the judgment of the Zoning Administrator or Plan Commission, sufficient visual and sound protection is provided by the combination of fencing and plantings provided.
 10. Any outdoor lighting located within a screening buffer shall be fully shielded and downcast to prevent any light trespass onto streets or adjacent properties.
- D. Buffering and Screening types.** The following types of screening may be implemented in conjunction with required site or parking lot landscaping, required screening, or required buffering. The Zoning Administrator or Plan Commission may require use of one or more of the following screening types, and may modify the specific standards set forth below, in order to mitigate visual and light trespass, achieve an appropriate transition between land uses, and enhance the visual quality of the site and surroundings.
1. **Type 1 Screen (planting).** A Type 1 screen consists of a continuous, ten foot (10') wide landscaped area between the parking lot and the street with a combination of closely-spaced shrubs, forbs, and perennial plants, and a minimum of one (1) shade/canopy tree per

twenty linear feet (20 LF) or two (2) evergreen or ornamental trees per twenty linear feet (20

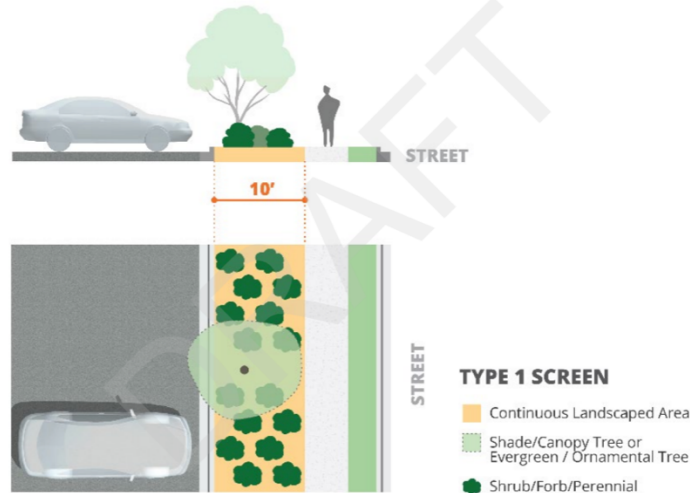


Figure 5 Type 1 Screen

LF).

- Type 2 Screen (planting and fence).** A Type 2 screen consists of a continuous, five foot (5') wide area between the parking lot and the street with a combination of closely-spaced shrubs, forbs, and perennial plants, an ornamental fence at least three feet (3') in height, and a minimum of one shade/canopy tree per twenty linear feet (20 LF) or two (2) evergreen or ornamental trees per twenty linear feet (20 LF).

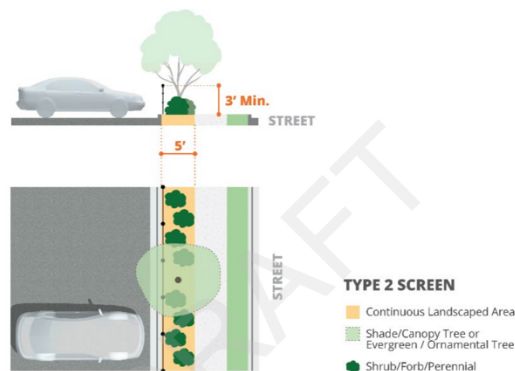
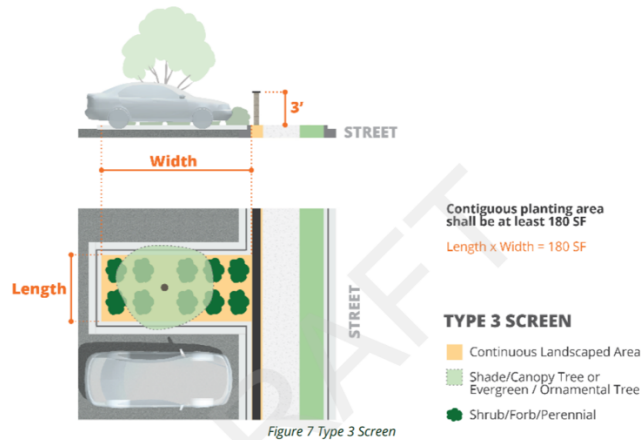


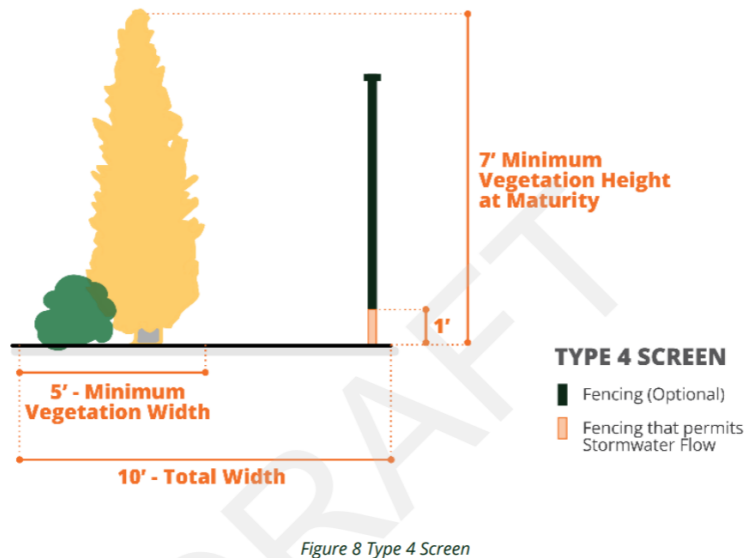
Figure 6 Type 2 Screen

- Type 3 Screen (wall).** A Type 3 screen consists of a three foot (3') high decorative masonry wall between the parking lot and the street, contiguous to one (1) planting area per forty linear feet (40 LF) with at least one hundred eight square feet (180 SF) in surface area planted with a minimum of one (1) shade/canopy tree. The planting area shall be [COUNT IT?]

DON'T COUNT IT?] in addition to required parking lot planting zones.



4. **Type 4 Screen (tall hedge).** A Type 4 screen consists of a continuous, ten foot (10') wide landscaped area between adjacent land uses (excluding off-street parking areas) or between a right-of-way and an adjacent land use, with dense vegetation that will form a vegetated hedge of at least five feet (5') in width and seven feet (7') in height at maturity. A Type 4 screen may include fencing.



5. **Type 5 Screen (naturalized/informal planting).** A Type 5 screen consists of a minimum of ten feet (10') in width and shall consist of split-rail or other naturalized fencing with shade/canopy or evergreen trees, a partial understory of ornamental or smaller canopy trees, and plantings with a mixture of groundcover, shrubs, grasses, and forbs. Conventional turfgrass shall not be utilized. The minimum planting per one hundred linear feet (100 LF) shall include one (1) canopy/shade tree, two (2) ornamental or evergreen trees, and a combination of shrubs, forbs, and grasses that occupies at least fifty percent (50%) of the area at the time of planting. Vegetated green infrastructure measures covering up to thirty percent (30%) of the total surface area may be incorporated in lieu of shrubs, forbs, or

grasses, where planted in accordance with an approved stormwater management plan.

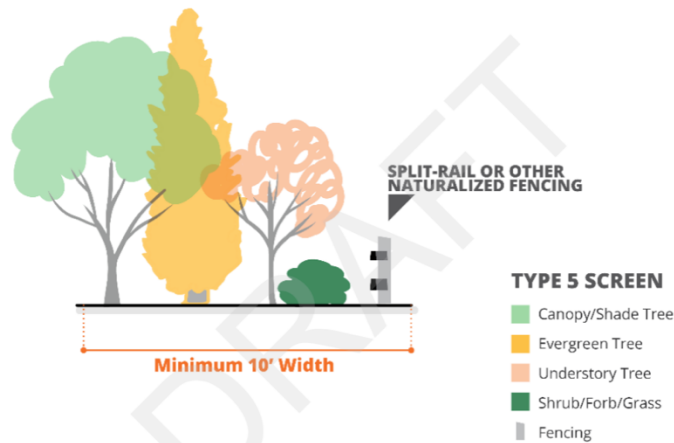


Figure 9 Type 5 Screen

E. Berms.

1. An earthen berm may be required to increase the effectiveness of a Type 4 or 5 screen.
2. The landscaping plan shall show the contours of the proposed berm and shall include one or more cross-sections detailing its construction.
3. Berms shall not exceed six (6) feet in height at any point, and shall be designed to be undulating rather than monolithic. Changes in slope generally shall be required every four linear feet (4 LF) at minimum
4. The required buffer width may be reduced by up to twenty-five percent (25%) for each one foot (1') of average height of the berm, measured along its horizontal distance at the ground surface.
5. No berm shall have a slope at any point greater than three to one (3:1).

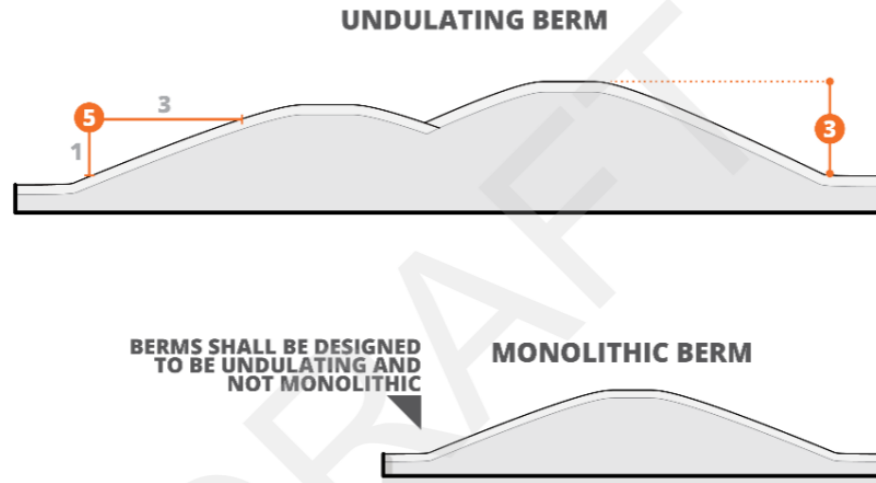


Figure 10 Berms

22.07.08. Surface Water and Wetland Buffers

A. Buffers Required.

1. Surface water and wetland buffers, as defined in this Chapter, shall be established or maintained as demarcated, vegetated, and minimally disturbed land areas on all surface waters and all federal jurisdiction, [POLICY OPTION: nonfederal jurisdiction], and shoreland wetlands as defined herein.

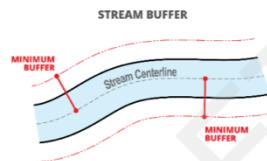


Figure 2 Stream Buffer

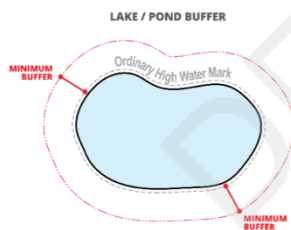


Figure 3 Lake/Pond Buffer

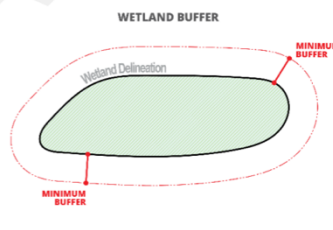


Figure 4 Wetland Buffer

2. Notwithstanding the foregoing, surface water buffers shall not be required to be designated or protected for artificial or degraded wetlands as defined under subsections (D)(1) and (D)(2) below.
3. Surface water and wetland buffers shall be established or maintained within the area extending horizontally from the ordinary high water mark of lakes and ponds, from the centerline of streams, or from the boundary of wetlands as delineated under Section 22.07.08(X) below at the following minimum widths:

Table 22.07.04 Required Surface Water and Wetland Buffer Widths

Zoning District	Minimum Buffer Width
Residential Districts	Fifty feet (50')
Non-Residential Districts	Thirty feet (30')

4. For sites in the [WHAT DISTRICTS] on which development has been authorized prior to the Effective Date of this Chapter, where the Plan Commission determines that full compliance with the standards in Table 15-7-02(A) is not feasible or recommended, the following minimum widths of surface water and wetland buffers shall be maintained:

Table 22.07.05 Required Surface Water and Wetland Buffer Width, Sites with Pre-Existing Development

Area of Parcel at Time of Application	Minimum Buffer Width
Less than one (1) acre	Ten feet (10')
One (1) to less than two (2) acres	Twenty feet (20')
Two (2) to three (3) acres	Twenty-five feet (25')
More than three (3) acres	Thirty feet (30')

5. Land Combination. In an application for land combination or certified survey map, the proposed total area of all parcels to be combined shall determine the required applicability of the standards in Table 22.07.05.
- B. **Exemptions.** Surface water and wetland buffer requirements shall not be applied to the area of land adjacent to any stream segment that is fully and permanently enclosed within a drainage structure, such as a pipe or culvert, as of the Effective Date of this Ordinance.
- C. **Surface Water, and Wetland Buffer Standards.** Within a woodland, wetland or stream buffer:
1. Unless authorized under [VARIANCE], no new or expanded impervious surface or building area shall be established or expanded within a required Wetland or Stream Buffer of a federal jurisdiction wetland or surface water.
 2. The expansion of pre-existing structures within Wetland and Stream Buffers shall be permitted only in accordance with the approval standards for non-conforming structures in [REFERENCE].

3. No part of any newly-created residential lot shall be established within a Surface Water and Wetland Buffer after the effective date of this Chapter.
4. Demarcation required.
 - a. Any approvals issued for land disturbance or land development on a site containing a Surface Water or Wetland Buffer, other than for modification of a single-family or two-family dwelling on a non-divisible lot existing as of the effective date of this Ordinance, shall include provisions to demarcate, with sturdy plantings, fencing (which shall not include chain-link or barbed wire fencing), landscape boulders, or a combination thereof, a boundary line along the edge of the Surface Water and Wetland Buffer on the site.
 - b. Demarcation materials shall be installed along the perimeter of the outside of the buffer to clearly identify the buffer area deter mowing and vehicular access. The design and installation of the materials shall accommodate stormwater flows and wildlife passage (excluding deer).
 - c. The Plan Commission may waive the requirement for demarcation if the applicant demonstrates there is sufficient existing woodland, landscaping, fencing, or other barrier along the surface water or wetland sufficient to deter mowing and vehicular access.

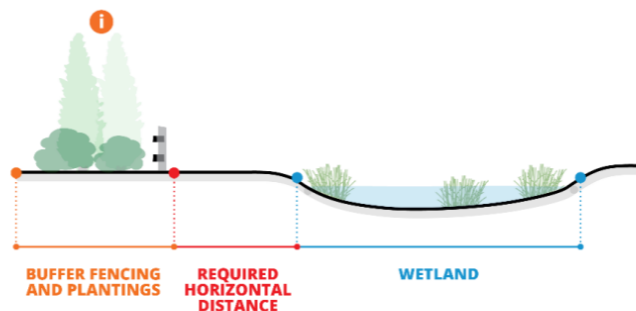
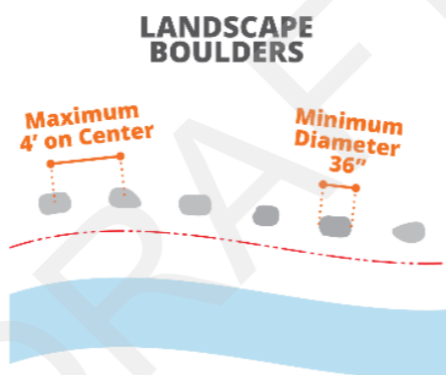


Figure 5 Required Landscaping and Fencing



5. All lands within a Surface Water or Wetland Buffer shall be left in an undisturbed, naturally vegetated condition. Supplemental planting and landscaping shall be permitted but may not include turf, sod, or other lawn grass; nor any invasive plant species on the Wisconsin Chapter 40 NR Invasive Species List.
6. The clearing of trees that are not dead, diseased, or invasive, and the clearing of any other vegetation other than invasive species on the Wisconsin Chapter 40 NR Invasive Species List, is permitted only upon application to and approval of the Zoning Administrator under [ZONING PERMIT] of this Ordinance.
7. Except where explicitly permitted to enable a utility, path or trail, or roadway crossing or other structure necessary to an essential service, in no case shall the buffer of a federal jurisdictional wetland or shoreland wetland to be retained on any site be reduced below twenty feet (20') in average width or five feet (5') in width at any single point. .

22.07.09. Application Requirements; Installation and Maintenance

A. Application.

1. **Preparation.** Landscape Plans shall be prepared by a Landscape Architect or professional landscape designer.
2. **Contents.** Each Landscape Plan shall contain the following:
 - a. **Preparer's name, license or registration number, and date of preparation.**
 - b. A base site plan that matches the site plan submitted for approval, showing planned planting locations and existing plantings to be preserved. Where existing parking lot planting areas are to be renovated or expanded in accordance with 17.06.01(F), the location, dimensions, and planned planting plan for any such areas shall be indicated.
 - c. Location, species, and size in DBH of all high value and specimen trees, noting clearly any to be removed and the critical root zone of any trees planned to remain.
 - d. Locations, species, and sizes of all proposed plantings, including vegetated areas to remain undisturbed, and the location, species, size in DBH, and critical root zone of all trees to be credited towards the required plantings in Table 22.07.XXXX
 - e. Locations and dimensions of all parking lot perimeter, median, and island planting areas, and cross sections of each area, demonstrating compliance with the soil volume and soil depth requirements of Table 22.07.XXXX, indicating that a waiver is requested.
 - f. Locations, types, and dimensions of all screens and screening buffers, including locations, dimensions, and types of plantings, fencing, and berms.
 - g. The location of surface water or wetland buffers, forest or woodland areas, wetlands, streams, and other Protected Areas as defined in Chapter 17.07, Natural Resources.

- h. A planting schedule of common names, botanical names, and planting sizes and quantities of all planting materials and ground cover.
 - i. A table demonstrating compliance with the requirements of Table 17.06-1.
 - j. The estimated total value of landscaping materials, including planting soil.
 - k. The direction and flow of site drainage and the location, type, and dimension of any stormwater management measures with landscaped areas.
3. **Implementation Schedule.** A schedule shall be provided for the implementation of all required landscaping, screening, and vegetated stormwater management measures. Any seasonally-dependent phasing shall be noted in order to inform conditions of any permits issued.
4. **Approval.** Landscape Plans must be approved by the Zoning Administrator or designee and, where integrated with a Stormwater Management Plan, the City Engineer.

B. Financial Guarantee.

- 1. **Letter of Credit or Financial Surety Required.** Before issuance of a zoning permit, the applicant shall furnish the City with a suitable performance bond, escrow account, or letter of credit in an amount sufficient to guarantee all landscaping and plantings as required under this Section, for a period of two (2) years.
- 2. **Surety to Include Cost of Groundcover.** The cost of vegetative ground cover shall be reflected in the financial surety held in accordance with this Chapter.
- 3. **Return of Financial Surety.** When it is determined that the landscaping and watering systems have been installed in accordance with the approved plans, the City shall return the surety to the applicant.
- 4. A Certification of Site Installation on a form provided by the City shall be submitted to the City and recorded prior to the release of the financial guarantee.

C. Installation and Maintenance.

- 1. Landscaping and irrigation shall be installed in accordance with the approved landscape plan prior to issuance of a Certificate of Occupancy or commencement of operations. The City will have the right to refuse approval of any project not meeting the provisions of this Chapter.
- 2. All landscape shall be maintained in a healthy, neat, trimmed, clean, and weed-free condition.
- 3. Any plant materials included in an approved landscaping plan that do not survive a plant establishment period of two (2) years after installation shall be replaced with plant material(s) of the same or like species of equal size within the next planting season.

4. Replacement shall be made by the property owner or, in the case of landscape plant materials located within a landscape easement under the control of a homeowners' association, the homeowners' association shall be responsible for replacement.
5. All plantings required under this chapter, including landscaping installed pursuant to an approved landscape plan, shall be maintained perpetually and replaced if they die or are substantially weakened or damaged. If plantings succumb due to disease or environmental conditions, plantings shall be replaced with more suitable or appropriate species of the same type (e.g. tree, shrub, groundcover).

D. Planting Delay for Seasonality

1. The Zoning Administrator may approve, on a case-by-case basis, an exception to the requirement for installation of landscaping prior to approval of a Certificate of Occupancy where weather and seasonal conditions would prevent successful planting. Exceptions shall be approved only in accordance with the procedures and requirements below.
2. The applicant or their designee shall provide a written request to the community development department for an exception prior to or concurrent with the submission of a certificate of occupancy application. The written request shall include an estimate for the anticipated installation (commencement and completion), and contact information.
3. Any such written request shall include:
 - a. A quote from the landscape architect or landscaping professional for all landscape elements included in the approved landscape plan, including installation costs. Where landscaping has been partially completed, the quote shall include only the remaining elements and installation costs.
 - b. A copy of the approved landscape plan upon which the quote is based. Where landscaping has been partially completed, the remaining elements must be clearly identified on the plans.