VILLAGE OF MENOMONEE FALLS

DESIGN GUIDELINES

Menomonee Falls
MORE THAN A VILLAGE

Landscape Guidelines

Adopted 11-19-2002 / Revised 9-27-04

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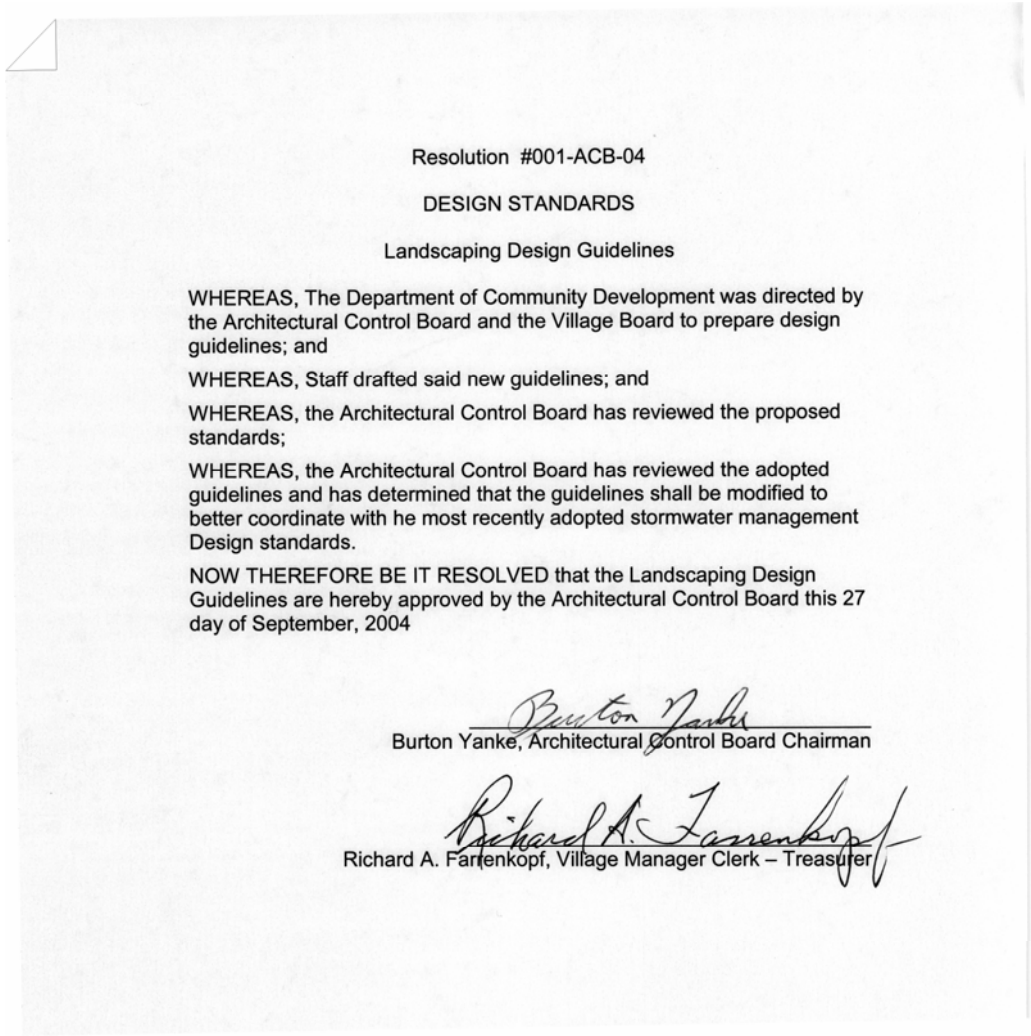
Adopting Resolution



Resolution #001-ACB-04

DESIGN STANDARDS

Landscaping Design Guidelines

WHEREAS, The Department of Community Development was directed by the Architectural Control Board and the Village Board to prepare design guidelines; and

WHEREAS, Staff drafted said new guidelines; and

WHEREAS, the Architectural Control Board has reviewed the proposed standards;

WHEREAS, the Architectural Control Board has reviewed the adopted guidelines and has determined that the guidelines shall be modified to better coordinate with he most recently adopted stormwater management Design standards.

NOW THEREFORE BE IT RESOLVED that the Landscaping Design Guidelines are hereby approved by the Architectural Control Board this 27 day of September, 2004

Burton Yanke, Architectural Control Board Chairman

Richard A. Farrenkopf, Village Manager Clerk – Treasurer

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Purpose

Welcome to the Village of Menomonee Falls Design and Development Guidelines Manual – Landscaping Standards. Its purposes are to further explain and graphically depict many community guidelines. We have organized the Development Guidelines Manual to allow you to understand our design guidelines. These guidelines are contained in multiple booklets. These booklets consist of Commercial, Office, Industrial, Mixed Use, Multi-Family Residential, Single Family Residential, and booklets for specific design districts.

The Village Board, Officials and the Department of Community Development desire to sustain the quality characteristics of our Village, neighborhoods, districts, and main thoroughfares, and to promote quality development throughout the Village. This desire has necessitated the creation of development guidelines that reinforces the goals of the entire Village. Different areas of the Village will attract development for different reasons from the Village Centre District with its high quality pedestrian turn of the century environment, to the Silver Spring District with its recognized potential as a mixed use corridor of high quality commercial, industrial, and residential developments. This manual allows the user to understand the goals and objectives of the Village in obtaining and preserving a high quality Village atmosphere.

Applicability

All subdivisions and land developments shall comply with the following guidelines.

A landscape plan shall be submitted as part of the preliminary subdivision plan, industrial and commercial use approvals, conditional uses, and multi family development applications. The landscape plan shall be prepared by a qualified professional such as a landscape architect, horticulturist, urban forester, nurseryman or landscape designer.

The landscape plan shall depict a planting design that mitigates the impacts of the proposed site activity, is coordinated with the proposed development and with the surrounding community character, and complies with at least the minimum planting requirements.

As used above a land development consist of any modification to a property that changes the existing condition or appearance of the property, or previously approved plan.

Submittal Requirements

The following requirements are found in Section 78 of the Municipal Code. The entire landscaping code may be found at www.municode.com.

Sec. 122-734. Landscape plan; contents.

A landscape plan must be submitted which includes details of all proposed landscaping, buffering, and screening. These plans shall be prepared by a state-licensed landscape professional, and shall include the stamp of that professional. The requirement that such plans and specifications be prepared by a registered landscape architect may be waived for minor alternations and improvements which, in the sole discretion of the department of community development, does not require the services of such a professional. The plans shall show the location and dimensions of all existing and proposed structures, parking, drives, rights-of-way, and any other permanent features, and all other information required by the plan commission and/or the architectural control board, including but not limited to the following:

(1) A plant list and coverage chart showing the location, quantity, size (at time of planting and at maturity), spacing, and the scientific and common names of all landscape materials used.

(2) The dbh of existing trees shall be provided.

(3) The location and percent of slope of all proposed berms using one foot contours.

(4) Detailed sections showing elevations of all proposed architectural features, such as walls, lighting or water features.

(5) Methods used in staking, mulching, wrapping or any other early tree care used.

(6) Existing plant materials proposed to remain. A separate plant list and coverage chart showing the location, quantity, size (at time of planting and at maturity), spacing, and the scientific and common names of all landscape materials used.

(7) Existing plant materials proposed to be removed. A separate plant list and coverage chart showing the location, quantity, size (at time of planting and at maturity), spacing, and the scientific and common names of all landscape materials used.

In addition to the following items may be required.

1. Drainage Plan.
2. Complete Contours for the site
3. Easements
4. Light poles and other lighting locations.

Buffer Plantings

Buffer plantings shall be installed in subdivision and land developments to integrate new development with its surroundings, to separate incompatible land uses by providing screening and to minimize or eliminate views to certain site elements in compliance with the following regulations:

1 Buffer plantings shall be required for the following types of developments specified in the Municipal Code.

   a. All non-residential development.
   b. All single family subdivisions
   c. All multi family developments
   d. All cluster developments
   e. All mobile home parks

2 The village manager or designee shall determine the adjacent land uses along each property boundary. In the case of vacant land, the existing land use plan, shall be used to determine the adjacent use. In the case of several permitted uses on a site, the most restrictive landscaping requirements shall apply. The village manager or designee shall have final approval of interpretation of land uses or zoning map.

3 Buffer area locations and dimensions

a. When required a buffer planting area of not less than 25 feet in width shall be established along all property lines and external street boundaries of the site for subdivision or land development, unless otherwise specified in the Zoning Ordinance. Where zoning regulations allow building setbacks less than 25 feet, the buffer area may be reduced to equal the width of the minimum building setback.

b. The buffer area may be included within the front, side, or rear yard setback.

c. The buffer area shall be a continuous pervious planting area consisting of trees and shrubs, with grass or groundcover. No paving shall be permitted within the buffer areas except for driveway crossings and/or walkways.

d. Berms shall be curvilinear and undulating wherever possible.

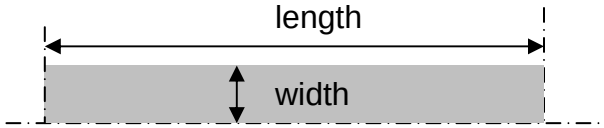
e. Parking is not permitted in the buffer area.

f. Stormwater basins are permitted in the buffer area, provided that the visual screening requirements of the buffer is still met.

g. Existing topographic conditions, such as a slope of a hill or ~~embankments or~~ berms, in conjunction with existing vegetation may be substituted for part or all of the required property line buffers at the discretion of the village manager or designee. The minimum visual effect shall be equal to or exceed that of the required buffer and screen.

h. The minimum planting requirements shall be determined by the intensity of the proposed land use and the adjacent land use, vacant land, or zoning district, according to table 1.

i. Minimum plant material requirements. The following requirements are minimum standards; additional plant materials, grading treatments, or architectural elements may be included in the plan, at the applicant's discretion. In accordance with Table 1 for every 100 linear feet of property line and external street boundaries of the site proposed for subdivision or land development to be buffered, the following minimum qualities, types and sizes of plant material shall be required.



j. A screening buffer must be adequate to visually screen the proposed land use or development from off-site view. Several different options could be used to create an effective buffer. Grading treatments and architectural features, such as berms, walls and or fences, may be necessary in addition to the minimum planting quantities in order to effectively provide a visual screen.

k. The limited area / buffer can be used in older developed areas where space for planting is severely restricted. The planting screen would be equivalent to evergreen hedge planting. Alternative planting arguments, such as shade or flowering trees with deciduous shrubs, could be considered in conjunction with a fence or wall, at the discretion of the Director of Community Development.

4 Mitigation of visual impacts. The use of a screening buffer shall be required to mitigate the adverse visual impacts which proposed land uses or site elements will have on the subject tract, adjoining properties and the community in general. In addition to the requirements for buffers as listed in Table 1 , the following proposed land use and site elements shall be screened from off-site view with a screening buffer planting:

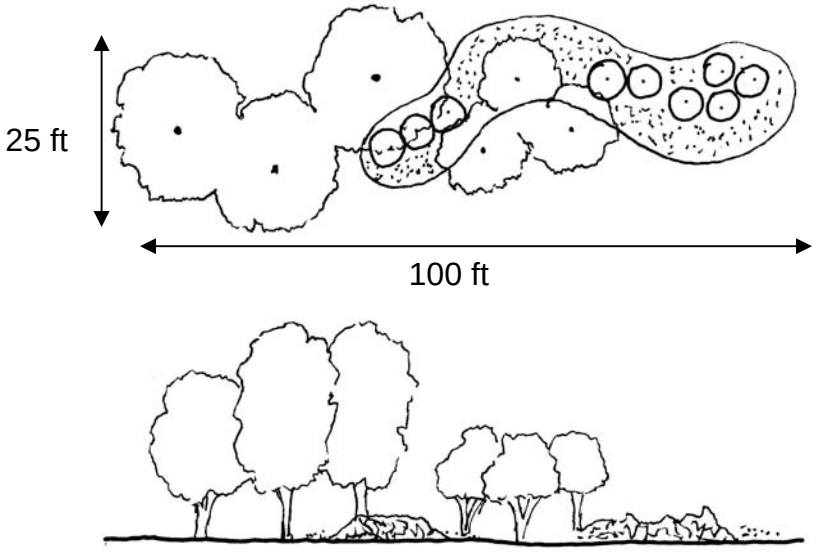
a. Dumpsters, trash disposal, recycling areas, and mechanical equipment.
b. Service and loading docks.
c. Outdoor storage area.
d. Sewage treatment pump stations and other similar structures.

i. **Softening buffer**:

a.) 3 canopy tree (2-2 ½" min. caliper) or 3 evergreen trees with a 8 foot min height

b.) 3 ornamental trees (1 ½ min. caliper or 6-8 foot minimum for multi stemmed or clump forms)

c.) 9 shrubs (24" min ht.)



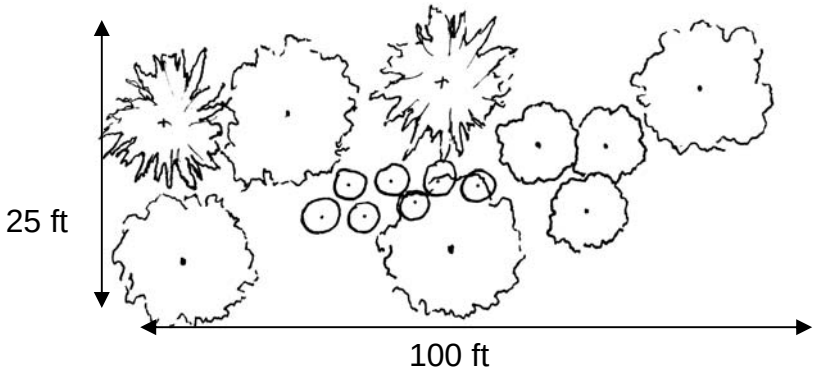
ii. **Filtering buffer**:

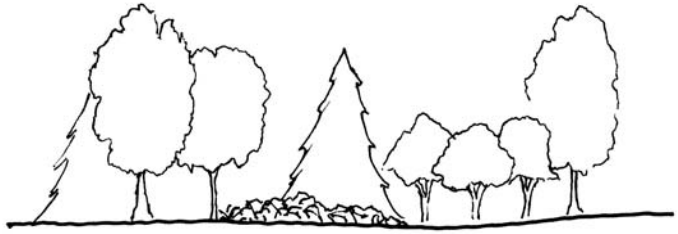
a.) 3-canopy trees (2 –2 ½" min. caliper) or 3 evergreen trees (8' min height)

b.) 3 ornamental trees (1 ½" min. caliper or 6-8 foot min for multi stemmed or clump forms

c.) 2 evergreen trees (8' min. ht.)

d.) 7 shrubs (24" min. ht.)





iii. **Screenings buffer**

a.) 5 evergreen trees (8’ min. ht.)

b.) 1 ornamental trees (1 ½ “min. caliper or 6-8 foot min. height for multi steamed or clump forms)

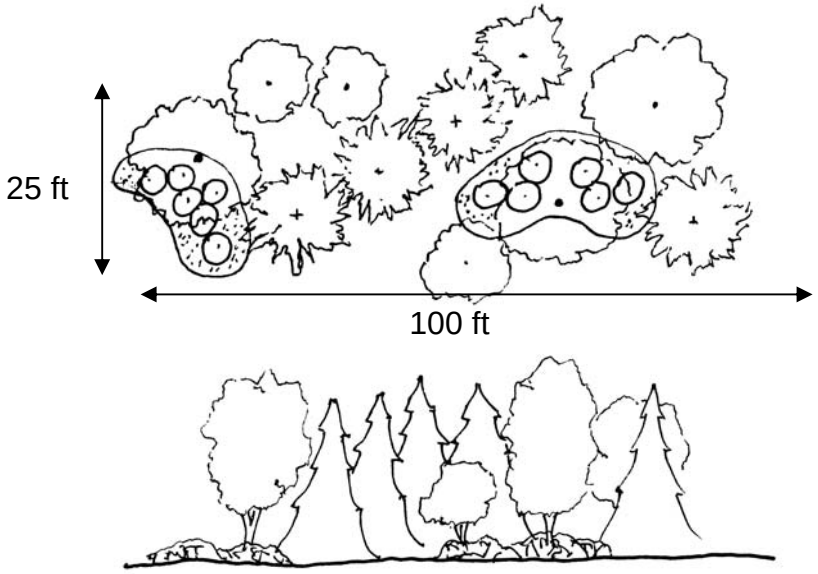
c.) 3 canopy trees ((2- 2 ½ “ min caliper)

d.) 12 shrubs (24” min. ht.)
or

e.) 30 upright evergreen shrubs (4’ min. ht.)
or

f.) 15 upright evergreen shrubs (4’ min. ht.) & 4 ornamental trees (1 ½” min. caliper) or 3 canopy trees (2 2 ½” min. caliper)

g.) or an alternative planting design that will result in at least an equivalent degree of visual screening to one of the above screening buffers.



iv. **Limited Area/Buffer**

a.) 1 upright evergreen shrub per 3 feet (4' min. ht.)

b.) Or 4-6 foot solid fence or wall.

Table 1
Property Buffers

	ADJACENT USES									
PROPOSED USE	Office	Institutional	Public Recreation	Commercial	Industrial	Multi Family	Single Family	Arterial Road	Secondary Road	Parking Lot
Office/	NA	NA	NA	NA	**Softening**	**Softening**	**Softening**	NA	NA	NA
Institutional	NA	NA	NA	NA	**Filtering**	**Softening**	**Softening**	NA	NA	**Softening**
Public Recreation	NA	NA	NA	NA	**Softening**	NA	**Softening**	NA	NA	NA
Commercial	NA	**Softening**	**Softening**	NA	**Filtering**	**Filtering**	**Screening**	NA	NA	NA
Industrial	**Filtering**	**Screening**	**Screening**	**Filtering**	NA	**Screening**	**Screening**	**Softening**	NA	NA
Multi Family	NA	NA	**Softening**	NA	NA	NA	**Filtering**	**Softening**	NA	NA
Single Family	NA	NA	NA	NA	NA	NA	NA	**Filtering**	NA	NA
Parking Lot	NA	NA	NA	NA	NA	**Filtering**	**Softening**	**Softening**	**Softening**	**Softening**

- See above for definitions of softening, filtering, and screening buffers.

Detention and Retention Basins

Landscaping shall be required in and around all stormwater management basins according to the following:

1 All areas of stormwater management basins, include basin floors, side slopes, berms, or other earth structures, shall be planted with suitable vegetation such as naturalized meadow plantings such as sedge meadows or lawn grass specifically suited for stormwater basins (see recommended plants for stormwater basins)

2 Trees and shrubs shall be planted in and around stormwater basins given they do not interfere in the proper function of the basin and no trees are planted within 25 feet of an outlet/drain structure, emergency spillway. Woody plantings shall not be located on the embankments of a detention basin. A minimum planting of two (2) trees and ten (10) shrubs per 100 linear feet of basin perimeter shall be planted in and around the basin.

3 Naturalized ground cover plant species, such as wildflowers, meadows, and non-aggressive grass specifically designed for the permanently wet, intermittently wet, and usually dry areas of stormwater basins, shall be seeded in the floors and slopes of the basin given:

   a. The plantings provide a satisfactory continuous cover to all areas of the basin.

   b. The plantings do not interfere in the safe and efficient function and maintenance of the basin as determined by the engineering services department.

   c. Lawn grass areas may be sodded or hydro-seeded to minimize erosion during the establishment period. Once established, these turfgrass areas shall be maintained at a height of not more than six inches.

4 Basin shape shall incorporate curvilinear features to blend with the surrounding topography.

5 Basins shall be designed to allow emergency and maintenance access. This area(s) shall be clearly indicated on the submitted plans.

6. Engineers, Landscape Architects, and Architects shall in addition to these guidelines consult the adopted Stormwater Management Design Guidelines available through the Engineering Department.

Woodland Edge Treatments

A newly created edge of an existing woodland, often create by new land development, has a raw open character. Due to the removal of adjacent trees, the trees remaining on the new edge are subject to wind throw, sun scald, and root damage from construction activities, grading and drainage changes.

1 Plantings that tolerate the combination of sun and shade and that have a naturalizing characteristic are the best candidate for planting in these areas.

2 The addition of canopy trees such as sugar maple (Acer saccharum), red maple (Acer rubrum) and green ash (Fraxinus pennsylvanica) can serve to fill the open space in the woodland canopy edge reducing the impacts of the newly created woodland edge.

3 Understory trees including dogwood (Cornus), Eastern redbud (Cercis canadensis), serviceberry (Amelanchier canadensis) can serve to fill the open space in the woodland canopy edge reducing the impacts of the newly created woodland edge.

4 Woodland edge shrubs should also be incorporated into the plantings. Appropriate shrubs include gray dogwood, cranberry bush viburnium and similar.

Street Tree Planting

The Menomonee Falls Subdivision Code requires Street trees to be installed along all streets in subdivision (see Section 94-172 Facilities and Improvements.)

1. The Developer shall furnish and install all landscaping in accordance with Village Ordinances and standards and as required by the approved landscape plan at no cost to the Village. The enhanced landscaping on the Subdivision shall be completed in accordance with the approved landscape plan prior to issuance of any building permits in the Subdivision.

2. Developer shall plant shade trees on private property located within a landscape easement, this landscape easement shall be located between the road right of way and a point ten feet beyond.

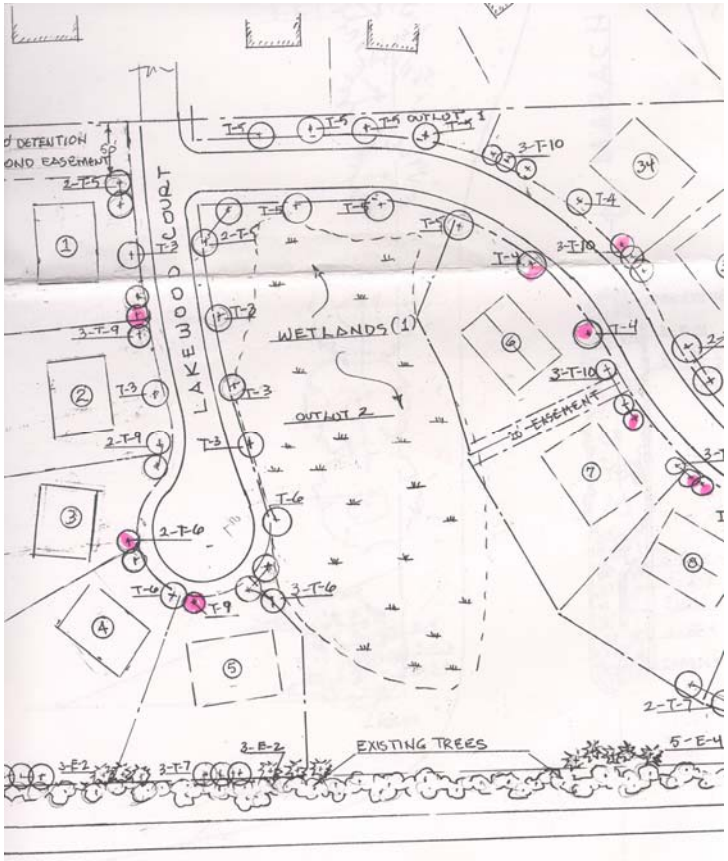
3. The landscape easement shall appear on the conceptual, preliminary, and final plats of the subdivision.

4. Shade trees shall be planted at an average interval of 40 feet along both sides of existing and proposed roads. Trees shall be planted along the entire frontage of the property, although they need not be evenly spaced.

5. The shade trees shall be planted with a minimum size of 2-1/2 inches in caliper.

6. Shade trees shall be planted a minimum of 6 feet from underground utilities.

7. A planting plan shall be submitted and approved by the Department of Community Development and the Engineering Services Department.



An example of a preliminary tree planting plan.

8. The planting plan shall indicate a variety of tree species. A subdivision shall have a minimum of 4 different species.

9. The submitted plan shall provide the following information: plan scale, date, north arrow, location of existing or proposed buildings, location of existing or proposed roads and right-of-ways, location of all ultimate right-of-ways, parking, service areas or other paved areas, sidewalks, berms, fences, street lighting, street signs, underground and above ground utilities, all existing and proposed contours at 2 foot intervals to determine the relationship of the planting and grading. Also to be show on the plans are areas with slopes in excess of 3:1, which shall be highlighted on the plan, existing mature trees within 30 feet of the right of way which will remain, location of required landscaping on out lots and subdivision entrances, a planting schedule listing the scientific and common name, size quantity, and root condition of proposed trees, planting details, including method of planting and protecting during construction, and the signature and seal of a registered landscape architect responsible for preparing the landscaping plan and details.

10. The trees shall meet the minimum standards for health, form, and root condition as outlined in the American Association of Nurserymen (AAN) standards. All trees shall be hardy and within the USDA Hardiness Zone 5 applicable to Waukesha County, Wisconsin.

11. A detailed cost estimate shall be submitted with the plan showing the value of all proposed landscaping, including all labor, materials, and guarantee.

12. The shade trees shall be planted within one years after the acceptance of the final plat of the subdivision or the C.S.M. The developer shall be responsible for the care and maintenance of the trees including, but not limited to, replacement, trimming and pruning for a period of one year from the date the trees are planted.

13. The Village will retain twenty -percent of the letter of credit during the one-year guarantee period.

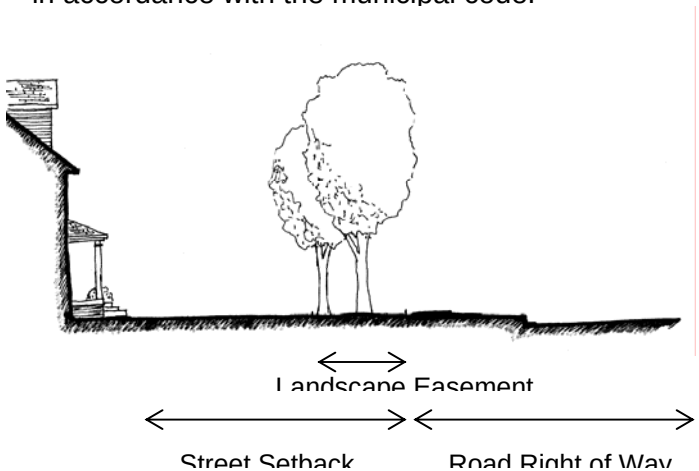
14. When all trees are planted the developer shall submit an as-built plan to the Department of Community Development and schedule an inspection.

15. The developer shall recorded a Deed Restriction for each lot requiring each lot owner to maintain and if necessary replace required and approved shade trees.

16. Developer shall preserve to the maximum extent possible existing trees, shrubbery, vines, and grasses not actually lying in public roadways, drainageways, building foundation sites, private driveways, soil absorption waste disposal areas, paths, and trails by use of sound conservation practices.

17. Developer shall remove and lawfully dispose of all destroyed trees, brush, tree trunks, shrubs, and other natural growth and all rubbish.

18. Developer shall re-turf all open cuts of ground and provide sod for any open cut subject to erosion in accordance with Village ordinance and standards established by the Director of Engineering Services in accordance with the municipal code.



Typical Street Section

Recommended Plant Materials

Shade and Canopy Trees - suitable for street trees, or parking lots as well as for buffers and screens (minimum mature height of 30 feet or more).

Scientific Name	Common Name
Acer platanoides cultivars	Norway Maple
Aesculus hippocastanum	Common Horsechestnut
Celtis occidentalis	Hackberry
Fraxinus americana	White Ash
Fraxinus Pennsylvania	Green Ash
Ginkgo Biloba	Ginkgo (male)
Gleditsia triacanthos inermis	Thornless Honeylocust
Ostyra virginiana	Ironwood
Quercus bicolor	Swamp White Oak
Quercus macrocarpa	Bur Oak
Quercus rubra	Red Oak (native)
Tillia cordata	Littleleaf Linden

Shade or Canopy Trees – suitable for property line buffers and non vehicular use areas only (minimum mature height 30 feet or more)

Scientific Name	Common Name
Acer platanoides	Norway maple
Acer saccharinum	Silver maple
Acer saccharum	Sugar maple
Betula nigra	River birch
Betula papyrifera	Paper Birch
Cercidiphyllum japonicum	Katsuratree
Fagus grandifolia	American Beech
Fagus sylvatica	European Beech
Fraxinus americana	White Ash
Ostyra virginiana	Ironwood
Quercus alba	White Oak
Quercus Rubra	Red Oak
Tillia Americana	

Ornamental Trees – suitable as street trees beneath overhead wires (15 to 30 feet in height)

Scientific Name	Common Name
Acer Ginnala	Amur Maple
Amelanchier canadensis	Serviceberry
Carpinus carolinia	Ironwood (American Hornbeam)
Cercis candensis	Redbud
Cornus mas	Corneliancherry Dogwood
Cornusmas alternifolia	Pagoda Dogwood
Crataegus phaenopyrum	Washington Hawthorn
Crataegus crus-galli	Cockspur Hawthorn
Hammamelis virginiana	Witch Hazel
Magnolia species	Magnolia
Malus sp.	Flowering Crab Sp.
Ostrya virginiana	Ironwood
Prunus species	Cherry or Plum sp.
Pyrus sp.	Pear sp.
Syringa reticulati clutivar	Japanese Tree lilac “Ivory Silk”
Viburnum lentago	Nannyberry
Viburnum prunifolium	Blackhaw Viburnum

Large Deciduous shrubs – Suitable for use in property line buffers or site element screen (not clipped hedges).

Under 15 feet in height

Scientific Name	Common Name
Aronia arbutifolia	Black Chokeberry
Cornus Sericea	Redosier Dogwood
Cotoneaster multiflorus	Many-flowered Cotoneaster
Forsythia sp.	Forsythia
Ilex verticilata	Winterberrry
Sambucus canadensis	Elderberry
Spriea sp. ‘spiraea’	Spirea

15 feet in height or larger

Cornus racemosa	Gray Dogwood
Cornus amomum	Silky Dogwood
Cornus mas	Corneliancherry Dogwood
Euonymous alatus	Burning Bush
Euonymus europaeus	European Euonymus
Lindera benzoin	Spicebush
Lonicera fragrantissima	Winter Honeysuckle
Rhus glabra	Smooth Sumac
Rhus typhina	Staghorn Sumac
Syringa reticulata	Japanese Tree Lilac
Viburnum dentatum	Arrow wood
Viburnum lantana	Wayfaringtree Viburnum
Viburnum lentago	Nanyberry
Viburnum opulus	European Cranberry
Viburnum prunifolium	Blackhaw Viburnum
Viburnum trilobum	American Cranberry

Deciduous or evergreen shrubs – suitable for clipped hedges in property lines buffers or site elements screens.

Scientific Name	Common Name
Berberis sp.	Barberry sp.
Cotoneaster acutifolius	*Peking Cotoneaster*
Euonymus alatus	Winged Euonymus
Euonymus alatus compactus	Dwarf winged Euonyums
Forsythia sp.	Forsythia
Ligustrum sp.	Privet sp.
Physocarpus opulifolius	Common Ninebark, Eastern Ninebark
Ribes alpinum	Currant
Spirea prunifolia	Bridalwreath Spirea
Taxus x media	Anglojap Yew
Thuja occidentalis	Eastern Arborvitae, 'Emerald', 'Fieldsii',
Viburnum dentatum	Arrowwood Viburnum

Evergreen shrubs –suitable for site element screens (minimum mature height – 4 feet)

Scientific Name	Common Name
Taxus sp.	Yew
Thuja sp.	Arborvitae
Juniper sp	Juniper

Evergreen Trees – suitable for property line buffers or site element screens. (Minimum height – 20 feet)

Scientific Name	Common Name
Abies concolor	White Fir, Concolor Fir
Picea abies	Norway Spruce
Picea glauca	White Spruce
Picea glauca	Black Hills Spruce
Picea omorika	Siberian Spruce
Picea pungens	Colorado Spruce and cultivars
Pinus mugo	Swiss Mountain Pine, Mugo Pine
Pinus nigra	Austrian Pine
Pinus stobus	White Pine
Pinus sylvestris	Scots Pine, Scotch Pine
Pseudotsuga menziessii	Douglas Fir

Recommended Plant List for Stormwater Detention Basin

Canopy Trees – Suitable for Stormwater Detention Basins

Scientific Name	Common Name
Acer rubrum	Red Maple
Amelanchier canadensis	Shadblow Serviceberry
Betula nigra	River Birch
Celtis occidentalis	Common hackberry
Fraxinus americana	White Ash
Fraxinus pennsylvanica	Green Ash
Larix laricina	Eastern Larch, American Larch
Salix x blanda	Wisconsin Weeping Willow
Quercus bicolor	Swamp White Oak
Tilia americana	American Linden, Basswood
Rhamnus frangula	Glossy Buckthorn, Alder Buckthorn

Deciduous/ evergreen ornamental trees - suitable for stormwater Detention Basins.

Scientific Name	Common Name
Picea glauca	White Spruce
Picea glauca	Black Hills Spruce
Taxodium distichum	Common Baldcypress

Deciduous or evergreen shrubs - suitable for stormwater detention basins

Scientific Name	Common Name
Aronia arbutifolia	Red Chokeberry
Aronia melanocarpa	Black Chokeberry
Cornus sericea	Redosier Dogwood
Cephalanthus occidentalis	Buttonbush, Button-willow, Honey Bells
Clethra alnifolia	Summersweet Clethra
Cornus racemosa	Gray Dogwood
Physocarpus opulifolius	Common Ninebark, Eastern Ninebark
Viburnum lentago	Nannyberry
Viburnum trilobum	American Cranberrybush Viburnum

Herbaceous Perennials – Suitable for Stormwater Detention Basins

Scientific Name	Common Name
Acorus calamus	Sweetflag
Ajuga reptans	Bugleweed/Carpetweed
Amorpha fruticosa	Indigo Bush
Anemone canadensis	Canada Anemone
Aquilegia canadensis	Wild Columbine
Asclepias incarnata	Swamp milkWeed
Asclepias tuberosa	Butterfly Weed
Astible	Astilbe
Aster novae angliae	New England Aster
Brunnera macrophylla	Siberian Bugloss
Caltha palustris	Marsh Marigold
Carex stipata	Awl-fruited Sedge
Cimicifugaracemosa	Bugbane or Snakeroot
Chelone glabra	Turtlehead
Filipendula rubra	Queen-of-the-Prairie
Iris pseudocorus	Yellow Flag Iris
Iris Siberica	Siberian Iris
Ligularia dentata	Bigleaf ligularia
Ligularia stenocephala	Narrow spiked ligularia
Lobelia siphilitica	Great blue Lobelia
Lobelia spicata	Pale-spike Lobelia
Lobelia cardinalis	Cardinal-Flower
Osmundra regalis	Royal Fern
Polemonium reptans	Jacob’s Ladder
Podophyllum peltatum	May-apple
Monarda fistulosa	Wild Bergamot
Thalictrum dasycarpum	Meadow-rue
Thalictrum dioicum	Early meadow-rue
Thalictrum thalictroides	Rue-anemone
Smolacomastellat	Starry false Solomon's-plum
Smilacina trifolia	Three-Leaf Solomon’s Plume

Prohibited Plant Materials

Noxious/Invasive Tree Species List

The following plant species may be consider noxious, invasive, exotic, or undesirable in sensitive plant communities. Their removal may be warranted for ecological restoration purposes. Removal of these specified plants should not require mitigation, as set forth in these guidelines. The following plant shall be used in designing landscapes with care.

Trees

Scientific Name	Common Name
Acer platanoides	Norway Maple
Ailanthus altissima	Tree of Heaven
Alnus glutinosa	European Alder
Eleagnus angustifolia	Russian Olive
Morus alba	White Mulberry
Morus alba	Mulberry
Pinus sylvestris	Scotch Pine
Populus alba	white Poplar
Rhamnus cathartica	Common Buckthorn
Robinia pseudoacacia	Black Locust
Sorbus acuparia	European Mountain-Ash
Ulmus parvifora	Chinese Elm
Ulmus pumila	Siberian Elm

Shrubs

Scientific Name	Common Name
Berberis thunbergii	Japanese Barberry
Berberis bulgaris	European barberry
Elaeagnus umbellata	Autumn Olive
Euonymus alatus	Burning Bush
Ligustrum bulgare	Common Privet
Lonicera maackii	Maack's Honeysuckle
Lonicera morrowii	Marrow's Honeysuckle
Lonicera x bella	Showy Bush Honeysuckle
Rosa multiflora	Mulitflora Rose
Viburnum lantana	Wayfaring Tree
Viburnum opulus	European Cranberry Bush

Vines

Scientific Name	Common Name
Ampelopsis brevipedunculata	Porcelain berry
Celastrus orbiculatus	Round leaved bittersweet
Euonymus fortunei	Wintercreeper
Hedera helix	English Ivy
Lathyrus latifolius	Everlasting Pea
Lonicera japonica	Japanese Honeysuckle
Vinca minor	Periwinkle
Vincetoxicum nigrum	Black swallow-wort
Vincetoxicum rossicum	Dog-strangling vine

Forbes, Grass, and Aquatics

Contact the Wisconsin DNR for information pertaining to forbes, grasses, and aquatics.

Definitions

Caliper means the diameter measurement of a tree taken 6" above the ground up to and including 4" caliper size, and 12" above the ground for larger sizes. Caliper of trees is a standard measurement used in the grading of nursery stock.

DBH or **dbh** means "diameter at breast height"; a measure of trunk diameter in inches, taken at 4 1/2 feet above the ground. The measured section should be unbranched and representative of the typical age of the tree species. The dbh measurement is applied to existing trees (compared to caliper used for nursery stock).