

Section 6.10 - Landscape requirements.

6.10.1 Landscape standards

6.10.1.1 Intent. It is the intent of this section to require landscape buffers and screening to reduce negative effects between incompatible land uses; to provide landscaping within parking areas; and to enhance the aesthetic qualities, character, privacy and land values of Delhi Charter Township. Landscaping shall be considered as the organization of outdoor space and shall be treated as a design element as important as building placement and vehicular circulation.

6.10.1.2 Requirement. Landscaping shall be provided as a part of site plan and/or subdivision design. The landscape plan shall be designed to achieve the following purposes.

- 1) To integrate the various elements of the site.
- 2) To preserve and enhance the site.
- 3) To improve and enhance the character of the site; to screen or filter views, where necessary; to help unify the various parts of the site; blend inharmonious land uses; and buffer incompatible uses.
- 4) To define and articulate outdoor and architectural space.
- 5) To control soil erosion; moderate harsh or unpleasant sounds; remove air pollutants; control glare and reflection; and slow the effects of erosive winds or water and promote stormwater retention, thereby helping to prevent flooding; and to block divert, or channel winds.
- 6) To moderate the effects of climate and to create a more desirable microclimate.

6.10.1.3 Definitions. Landscaping may include plant materials such as trees, shrubs, groundcovers, perennial and annual plants; landscape elements such as rocks, water features, fences, walls, paving materials, and site lighting; and site furnishings such as benches, drinking fountains, trash receptacles and planters.

6.10.1.4 Green area. All parts of a site that will not be covered by buildings or other structures, streets, driveways, parking lots, or other paved areas are green areas. Green areas shall be stabilized with grass or ground covers, low growing shrubs, or mulch material. In cases of new construction, green area shall be installed within two (2) planting seasons, as defined by subsection 6.10.2.3.7) of this Ordinance, from issuance of the building permit or no more than one (1) year, whichever is less.

6.10.1.5 Buffer zones. Buffer zones shall be required between zoning districts. See Landscape Buffer Matrix at the end of [section 6.10](#). Buffer zones shall meet the following standards:

- 1) Minimum width shall be as follows:
 - a) Type A shall be fifty (50) feet.
 - b) Type B shall be thirty (30) feet.
 - c) Type C shall be ten (10) feet.
- 2) Buffer zones shall contain one (1) tree for each thirty (30) lineal feet, or fraction thereof, of the length of the buffer zone.
- 3) Buffer zones. The buffer zone shall contain a screen comprised of shrubs, screen walls, fence, or a combination thereof based on the following criteria:
 - a) When berms, screen walls, and/or screen fencing are used as a part of the screen for all or part of the required buffer zone, one (1) shrub shall be required for each ten (10) lineal feet or fraction thereof of the buffer zone with berm, screen walls, or screen fencing shrub shall be spaced and located to provide the fastest and most aesthetically pleasing arrangement for both the subject property and the public.
 - b) When only plant materials are used for all or part of the required buffer zone, four (4) shrubs shall be required for each twenty (20) lineal feet or fraction thereof of the buffer zone.
- 4) In no case shall buffer zones be considered as a part of the off-street parking area landscape requirement. All required buffer zones shall consist of green space, landscaping and shrubbery. No driveways, maneuvering lanes, parking spaces or other hard surface areas are permitted within any buffer zone except for shared access drives.
- 5) The director of community development may recommend approval of alternative spacing arrangements and alternative numbers of plant materials if the intent of reducing negative effects between incompatible land uses is achieved.

6.10.1.6 Greenbelts. Greenbelts shall be required where a developed parcel abuts a public thoroughfare. Greenbelts shall meet the following standards:

- 1) Greenbelts are to be constructed only on private property and are not a part of the public rights-of-way. Tree planting in the Greenbelts are to be planted and maintained in strict accordance with the requirements of the Ingham County Road Commission, Michigan Department of Transportation, or other unit of government having jurisdiction.
- 2) The minimum width of a required Greenbelt shall be at least ten (10) feet.
- 3) Greenbelts shall contain one (1) tree for each fifty (50) lineal feet of frontage, or fraction thereof, on a public thoroughfare. At least one-half of the required trees shall be canopy trees. Trees shall be spaced and located to provide the safest and most aesthetically pleasing arrangement for both the subject property and the public. In addition, no tree shall be planted closer than twenty-five (25) feet to the intersection of two (2) crossroads, measured from the point of intersecting curb lines or the edge of the pavement if there is no curb.
- 4) Further, Greenbelts shall contain one (1) shrub for each ten (10) lineal feet, or fraction thereof, of frontage on a public thoroughfare. Shrubs shall be spaced and located to provide the safest and most aesthetically pleasing arrangement for both the subject property and the public.
- 5) Deciduous trees, of a species that is approved by the Ingham County Road Commission, may be planted no closer than five (5) feet behind the curb, ten (10) feet in a cul-de-sac island. No evergreen tree, ornamental tree, fruit or nut bearing tree, or other trees not included in the approved list shall be planted closer than fifteen (15) feet behind the curb. No tree shall be planted closer than nineteen (19) feet from the near edge of the pavement if there is no curb.
- 6) The minimum size of a tree to be planted shall be two and one-half (2½) inches in diameter, measured six (6) feet above the base of the tree.
- 7) All trees shall be installed following accepted professional planting procedures as specified in the current Michigan Department of Transportation Standard Specification for Construction. At a minimum, balled and burlapped trees shall be backfilled with high quality top soil, planted in excavations that are two (2) times the diameter of the root ball or two-foot in diameter for every one-inch of diameter for bare root planting stock, one-foot deeper than the height of the root ball or root mass for bare root stock, staked, mulched and watered at the time of planting.
- 8) Trees to be planted should be chosen from those species that are well adapted to the conditions in which they will be planted, are hardy, disease-resistant, long-lived and not prone to weakness. The director of community development shall retain the right to prohibit the use of any species of tree which, in the director's opinion, is not consistent with the requirements and goals of this section.
- 9) All street tree plantings shall be included in the road construction plans, including variances from any of the standards above, and shall be approved by the Managing Director of the Ingham County Road Commission prior to planting.
- 10) In no case shall Greenbelts be considered as a part of the off-street parking area landscape requirement.
- 11) The director of community development may recommend approval of alternative spacing arrangements and alternative numbers of plant materials if the intent of reducing negative effects between incompatible land uses is achieved.
- 12) Greenbelt plantings are required in residential subdivision. Subdivision greenbelts will not be required to provide shrubs as indicated in subsection 6.10.1.6. 4).

6.10.1.7 Off-street parking areas. Landscaping shall be required when six (6) or more parking spaces are required. The following landscape requirements shall be met:

- 1) Required landscape areas shall be at least eight (8) feet wide and contain at least one hundred twenty (120) square feet.
- 2) Required landscape areas shall be covered with turf, shredded bark, stone, or living groundcover plants.
- 3) All landscape areas shall contain at least one (1) canopy tree. One (1) canopy tree and one hundred (100) square feet of landscaped area shall be required per ten (10) parking spaces. Trees shall be located to assure that no damage will occur to or from adjacent parked vehicles and shall be spaced and located to provide the safest and most aesthetically pleasing arrangement for both the subject property and the public. The location of the required landscaped areas shall be directed by subsection 6.10.7. 5).
- 4) All landscaping shall be protected by a raised standard or rolled curb and gutter unless otherwise approved by the Delhi Charter Township Planning Commission.
- 5) Delhi Charter Township shall approve the location of required off-street parking area landscaping using the following criteria:

- a) Landscaping shall be arranged throughout the parking lot in order to break up large expanses of parking area.
- b) The location of canopy trees and landscape material shall be designed so that they are reasonably dispersed throughout the parking area to screen from adjacent properties and from the public street, to provide for effective and efficient site maintenance, and to not impede vehicular and pedestrian circulation within the site.
- c) Landscaping shall be installed in such manner that when mature, the material will not obstruct traffic signs, fire hydrants, lighting, drainage patterns, or vision for reason of safety, ingress or egress.
- d) Alternative paving techniques that are designed to permit the percolation of stormwater into the area below the paving are used, and it is demonstrated that the placement of required landscaping within the parking area will limit the effectiveness or ability to maintain the alternative paving system, the planning commission may permit the placement of required landscaping in alternate locations on the site.

6.10.1.8 Landscape plans. Landscape plans shall provide the following information:

- 1) Existing and proposed topography, by contours with an interval of no greater than two (2) feet, correlated with the grading plan.
- 2) Location, type and size of existing plant material and the proposed means of protecting the plant material during construction.
- 3) Location of proposed plant materials; a planting list of proposed materials, showing sizes, height, quantity, botanical and common names, spacing, and root type (bare root or balled and burlapped).
- 4) Location of all proposed improvements, as shown on the site plan.
- 5) Sections, elevations, plans and details of landscape elements such as berms, walls, ponds, retaining walls and tree wells.
- 6) Proposed planting dates.
- 7) Irrigation system plan if included for watering landscaped areas.
- 8) Sub drainage systems for the drainage of landscape areas.
- 9) Planting and staking details, in text or graphic form, explaining the method of installation type and depth of mulch, and any special planting requirements.

6.10.2 Plant materials

6.10.2.1 Installation. Plant materials shall be installed in a sound, workman-like manner, and according to acceptable planting procedure. All plant materials shall be maintained in a healthy and growing state. All landscape elements such as, but not limited to, fences, screens, walls, or lighting shall be kept in good repair. All landscaped areas shall be maintained by pruning, trimming, weeding, clearing of undergrowth, fertilizing, and watering at intervals necessary to promote optimum growth and health.

6.10.2.2 Maintenance. Materials that are unsightly, dead, dying, or that become unhealthy because of damage, neglect, drainage problems, disease, insect infestation, or other causes shall be replaced within the current planting period. Replacement materials shall meet all standards of the original installation. All landscaped areas shall be provided with a readily available and acceptable water supply. Newly planted materials shall be regularly watered until established. The property owner, tenant and their agent, if any, and any homeowners' or condominium association, if any, shall be jointly and severally responsible for maintenance of landscaped areas. Trees shall be maintained such that limbs over roadways will be at least thirteen (13) feet above the elevation of the street surface.

6.10.2.3 Plant material standards. Plant materials shall meet the following standards:

- 1) Plant and grass materials shall be acceptable varieties and species, hardy in Ingham County, and shall conform to the current minimum standards of the American Association of Nurserymen, and shall have passed any inspections required under state and federal regulations.
- 2) No plant materials used to satisfy these standards shall be comprised of nonliving materials, such as "plastic" plants.
- 3) Canopy (deciduous) trees shall be species having an average mature crown spread greater than fifteen (15) feet and a mature height of forty (40) feet or more in Ingham County and having trunks that can be maintained with over five (5) feet clear stem if conditions of visibility require; except, however, at street intersections, where at least eight (8) feet stem clearance will be required. Deciduous tree species shall be a minimum of ten (10) feet overall height or a minimum caliper of two and one-half (2½) inches at planting.
- 4) Evergreen trees shall be a minimum of six (6) feet high with a minimum spread of three (3) feet and a burlapped ball size at least ten (10) times the caliper at planting.
- 5) Evergreen and deciduous shrubs that are balled and burlap or bare root shall be a minimum of two (2) feet high, measured at

planting, or two (2) feet in spread if the plants are low growing spreading evergreens. Shrubs in landscape containers shall be a minimum of a #5 container size.

- 6) Groundcovers shall be installed and maintained until such time that they present a finished appearance and reasonably complete coverage. Groundcovers shall be planted at a rate of at least three (3) plants per square foot.
- 7) A "planting season" for required trees, shrubs, grass, groundcover and other plantings shall be the periods of April 1 to June 30 and September 1 to October 31.
- 8) Lawn grass shall be planted in species grown as permanent lawns in Ingham County. Grass may be plugged, sprigged, seeded or sodded, except that rolled sod, erosion reducing net, or suitable mulch shall be used in swales or other areas subject to erosion and shall be staked where necessary for stabilization. When complete sodding or seeding is not used, nursegrass seed shall be sown and mulched for immediate protection until permanent coverage is achieved. Grass sod and seed shall be free of weeds and noxious pests or diseases.
- 9) All plant materials shall be well formed, sound, vigorous, healthy and free from disease, sunscald, windburn, abrasion and harmful insects or insect eggs including root systems at the time of planting, and shall not be of a species that is known to carry or be a host to destructive pathogens or pests.
- 10) The following plant materials are not permitted for planting in required buffer zones, Greenbelts, or the interior planting areas of parking lots due to their tendency to have wood that is brittle and breaks easily; their roots are known to clog drains and sewers; and they are known to be susceptible to disease or insect pests:

Common Name	Horticultural Name
Silver Maple	Acer saccharium
Boxelder	Acer nugundo
Ash	Fraxinus species
Honey Locust (thorned)	Gleditsia t. (thorned)
Ginko (female)	Ginko Biloba (female)
Mulberry	Morus species
Popular	Populus species
Black Locust	Robinis species
Willow	Salix species
American Elm	Ulmus americans
Siberian Elm	Ulmus umila
Slippery Elm (Red Elm)	Ulmus rubra
Chinese Elm	Ulmus parvilolia

6.10.3 Landscape elements

- 6.10.3.1 Standards. Landscape elements shall meet the following standards:

- 1) Berms. Berms shall be constructed with slopes no greater than one (1) foot vertical for each three (3) feet, with at least a two-foot wide generally flat top. Adequate protection against erosion shall be provided. Berms shall be designed and constructed to appear as natural features in the landscape in the vicinity. Uniform heights and shapes should be avoided. If a slope greater than one (1) (vertical) on three (3) (horizontal) is necessary, the surface shall be planted with a groundcover that is suitable for stabilizing the surface.
- 2) Mulching material. Mulching material for planted trees, shrubs and vines shall be a minimum of four-inch deep shredded hardwood bark. Decorative materials, such as stonechips, woodchips, mulch, or cobblestones within planting beds and areas shall be placed on a permeable landscape fabric that allows passage of water and air to the soil below. Polyethylene or plastic films shall not be used for this purpose.
- 3) Walls and fences. Walls shall be constructed of stone, brick or similar materials. Fences for landscaping purposes shall be constructed of wood. Chain link or other metal fences shall not be used for landscaping purposes. Walls and landscape fences shall be correlated with buildings, in terms of design and materials, and with the character of the site.
- 4) Paving materials for walks, drives, and parking. Paving materials shall be installed in a manner that will either contrast with or complement the other landscape elements and plant materials.

6.10.3.2 Topsoil. Topsoil removed during construction shall be stockpiled in an appropriate manner to prevent erosion, and shall be redistributed on regarded surfaces to be landscaped, to provide a minimum of four (4) inches of even cover. The topsoil shall then be permanently stabilized by grass, groundcover or other plantings.

6.10.3.3 Landscape refuse. All stumps and other tree parts, litter, brush, weeds, excess or scrap construction materials, or other debris shall be removed from the site and deposited according to law. No tree stumps, or portions thereof, or tree limbs shall be buried on the site. Dead or dying trees, standing or fallen, shall be removed from the site. If trees and limbs are reduced to chips, they may be used on the site as a mulch, surface for paths, or similar purposes, only if the plants were free of disease prior to removal.

6.10.3.4 Existing plant materials. Healthy plant materials existing on a site prior to its development shall be incorporated into the landscape plan. Existing material shall conform to section 6.10.2.3 above. The planning commission may require that such existing materials be inspected by the township's consulting landscape architect and/or urban forester before accepting them as part of the landscape plan. The planning commission may require the saving of significant existing plant materials based upon their determination that a reasonable layout is possible incorporating those materials. Significant materials shall be defined as those not readily replaceable by virtue of their size, species, variety, shape; or location and may include significant wildlife habitats. For existing plant materials to be saved, the planning commission may require that approval of the township's consulting landscape architect be obtained before any limb removal, root pruning, or other work is done.

6.10.3.5 Detention and/or retention areas. Detention and/or retention areas shall be permitted within buffer zones provided that they do not hamper the screening intent of the buffer or jeopardize the health or survival of both existing and proposed plant materials.

6.10.3.6 Solid waste dumpsters. Solid waste dumpsters and recycling storage containers may be installed in buffer zones provided that they are screened by a continuous opaque screen at least six (6) feet high. Such screen shall be comprised of berms, plant material, screen walls, fencing or any combination of these elements.

6.10.3.7 Phased projects. If a project is to be constructed in phases, the landscape screen may also be constructed in phases. Delhi Charter Township shall determine the extent of each phase on:

- 1) Adjacent land use.
- 2) Distance between land uses.
- 3) Operation characteristics on- and off-site.
- 4) Height of structures.
- 5) Physical characteristics of site such as topography, existing vegetation, and utilities and natural drainage.

6.10.3.8 Waiver of screen requirement. Delhi Charter Township determines that adequate existing screen on-site already exists or that such landscape screening shall not be required in a buffer or Greenbelt situation. The applicable zoning ordinance provision may be waived by Delhi Charter Township in whole or in part. Criteria considered in such waiver shall include, but not limited to:

- 1) Topography.

- 2) Existing on-site vegetation.
- 3) Existing and proposed building location(s).
- 4) Sight distances.
- 5) Adjacent land use.
- 6) Existing floodplain, wetland, and/or conditions.

6.10.3.9 Provision for installation and maintenance.

- 1) Delhi Charter Township may require a financial guarantee of a sufficient amount to insure the proper installation of all required landscaping materials and elements.
- 2) Further, Delhi Charter Township shall mandate that all landscaping shall be maintained in a healthy, neat and orderly state which is free from refuse and/or debris. All dead and/or diseased plant material shall be removed and replaced.

LANDSCAPE BUFFER REQUIREMENTS

ZONING OF ADJACENT PROPERTY

ZONING OF SUBJECT PROPERTY		A-1	R-1A	R-1B	R-1C	R-1D	R-1E	RM	RM1	RM2	TC	C-1	C-2	C-3	PP	IP	IW	IR	IA	IM	
	A-1																				
R-1A																					
R-1B																					
R-1C																					
R-1D																					
R-1E																					
RM	C	C	C	C	C	C	C	C	C	C	C				C						
RM1	C	C	C	C	C	C	C	C	C	C	C				C						
RM2	C	C	C	C	C	C	C	C	C	C	C				C						
TC	B	B	B	B											C						
C-1	B	B	B	B	C	C	C	C	C	C	C				C						
C-2	B	B	B	B	C	C	C	C	C	C	C	C			B						
C-3	B	B	B	B	B	B	B	B	B	B	B	B	C		B						
PP	B	B	B	B	B	B	B	C	C	C	C	C									
IP	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A						
IW	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A						
IR	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A						

	IA	A	A	A	A	A	A	A	A	A	A	A	A	A					
	IM	A	A	A	A	A	A	A	A	A	A	A	A	A					

(Ord. No. 39.51, 11-16-93; Ord. No. 39.63, 1-2-96; Ord. No. 39.65, 5-21-96; Ord. No. 39.66, 10-1-96; Ord. No. 39.68, 8-19-97; Ord. No. 39.76, 9-1-98; Ord. No. 39.100, § 3, 8-8-02; Ord. No. 39.104, 1-20-04; Ord. No. 39.117, 2-7-06; Ord. No. 39.129, 6-19-07; Ord. No. 39.151, 1-20-09)