

**□ ORDINANCE OF THE TOWNSHIP COUNCIL OF THE  
 TOWNSHIP OF TOMS RIVER, OCEAN COUNTY, NEW JERSEY,  
 REPLACING SECTION 8.4 (BUFFER AREAS, SCREENING,  
 LANDSCAPING AND SHADE TREES)  
 AND REPLACING IT WITH A NEW SECTION 8.4 (LANDSCAPE  
 AND BUFFER STANDARDS) OF CHAPTER 348  
 (LAND USE AND DEVELOPMENT REGULATIONS) OF THE  
 TOWNSHIP CODE**

**BE IT ORDAINED** by the Township Council of the Township of Toms River, in the County of Ocean, and State of New Jersey as follows:

1. Section 348-8.4 (Buffer areas, screening, landscaping and shade trees), be deleted in its entirety and replaced with a new section, entitled "Landscape and Buffer Standards" to read as follows:

**§ 348-8.4 Landscape and Buffer Standards.**

\*A. Buffer areas. All uses, other than single-family detached and two-family detached dwellings and their accessory uses (except as otherwise provided in this chapter), shall provide buffer areas along all side and rear property lines which abut areas zoned residentially (including single-family detached, two-family or multifamily detached dwellings) and along front property lines on local, local collector, minor collector and major collector streets which abut areas zoned for such residential uses. For purposes of these buffer areas, a planned residential retirement development having a density of 4.0 units per acre shall not be considered single-family detached and two-family detached dwellings and shall require provisions for buffer areas as provided herein. [Also refer to § 348-8.20J(2)(b).]

- (1) The width of the buffer area shall be determined in accordance with the following:

Zone	Minimum Buffer Width
HB, RHB, O-10, O-15, I, LI,	60 feet
R-800, Rural, R-400, R-400C, R-200	50 feet
RC	150 feet average, 100 feet minimum
All other zones and any parking area of 10 or more spaces in a residential zone	20 feet along side and rear property lines

- (2) If a proposed single-family detached or two-family detached subdivision abuts a major collector or minor or principal arterial highway or an area zoned for or occupied by other uses, the Board of jurisdiction shall consider the need for buffer areas and may require:

- (a) That a buffer strip not exceeding 50 feet in width be provided and maintained in its natural state and/or suitably planted with screening and landscaping; or
- (b) That the adjacent lots front on an interior street and have a depth of at least 200 feet with suitable screening and landscaping planted at the rear; or
- (c) That other suitable means of separation be provided.

- (4) Buffer areas shall be maintained and kept free of all debris, rubbish, weeds and tall grass.

- (5) No structure, activity, storage of materials or parking of vehicles shall be permitted within the buffer area, except that where permitted by the Board of jurisdiction the buffer area may be broken for vehicular or pedestrian access and appropriate directional and safety signs provided.

(6) (Reserved)

\*B. Screening. Within buffer areas required by Subsection A above, there shall be provided screening in accordance with the following regulations:

(1) Location.

(a) The location of screening within buffer areas wider than 20 feet shall be arranged in order to provide a continuous visual screen and maximum protection to adjacent properties and to avoid damage to or interference within desirable existing plant material and shall be subject to approval by the Board of jurisdiction. Possible arrangements include but are not limited to those shown in Figures 1A, 1B and 1C.

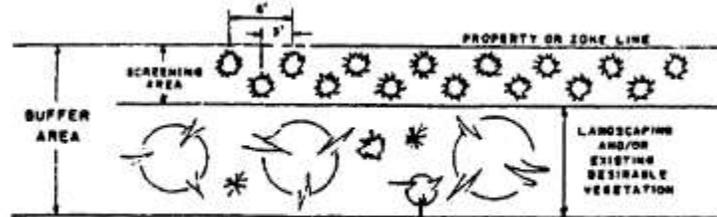


Figure 1A  
PARALLEL SCREENING

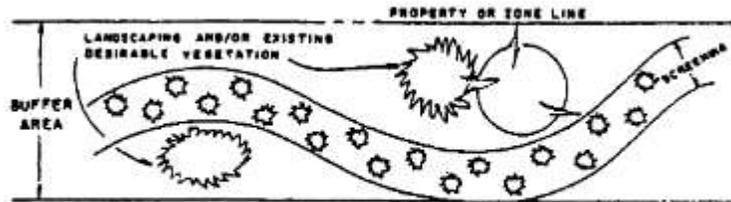


Figure 1B  
SERPENTINE SCREENING

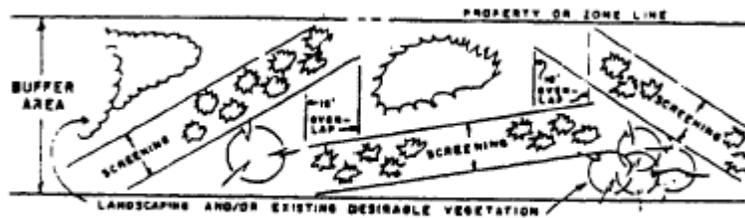
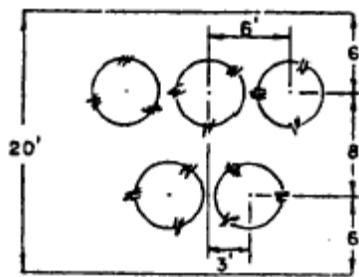


Figure 1C  
BROKEN SCREENING

(b) Those portions of the buffer area not included within the screening strip shall either contain existing vegetation approved by the Board of jurisdiction or its designee and/or be planted with trees and shrubs in accordance with a landscape plan approved by the Toms River Township Planning Board or its designee.

(2) Except as otherwise provided herein, the screening area shall be a minimum of 20 feet in width and shall be planted with evergreen trees specified in this ordinance or otherwise approved by the Board of jurisdiction. Trees shall be planted in two staggered rows eight feet apart and shall be between six and eight feet in height and shall conform to the current American Standard for Nursery Stock sponsored by the American Association of Nurserymen, Inc. Within each row, the trees shall be planted on six-foot centers. (See Figure 2A below.)



**FIGURE 2A**

**STANDARD SCREENING**

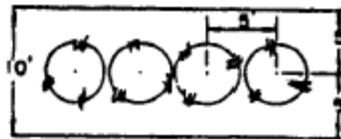
(3) In cases where it is determined to be necessary or desirable by the Board of jurisdiction to create an effective screen, the developer shall install a solid six-foot-high solid vinyl fence, or a substitute acceptable to the Board, along the outside of the required screening strips prior to commencing the construction of improvements on the site.

(4) Where existing specimen trees, as defined in Chapter 471, Trees, of the Code of the Township of Toms River, exist within a screening area, they should be retained and supplemented with shade-tolerant evergreen trees to provide the equivalent of the required screening as determined by the Board of jurisdiction.

(5) Where all proposed buildings, parking areas and other improvements are located 100 feet or more from a property line abutting a residential zone or a permitted residential use and there sufficient existing vegetation to contribute to the effective screening of the proposed development, the Board of jurisdiction may permit a screening strip of 10 feet in width planted with a single row of evergreen trees in a location approved by the Board of jurisdiction planted on five-foot centers with a minimum height of six to eight feet of a type and species to be substituted for the screening area required in Figure 2A. (See Figure 2B below.)

**FIGURE 2B**

**MODIFIED SCREENING**



Single row of approved evergreen trees.

(6) The required height for a screening area shall be measured in relationship to the elevation of the land at the nearest required rear, side or front yard setback line of the abutting residentially zoned properties. Where the average ground elevation of the location at which the screening strip is to be planted is less than the average ground elevation at the nearest required rear, side or front setback line on the abutting residentially zoned property, the Board of jurisdiction shall require that the screening strip be bermed and the height of trees planted in the required screening strip be increased so that the height of the berm and increased height of the trees is equal to the difference in elevation.

(7) All trees in a screening area shall be watered weekly through the first growing season. The developer shall construct a six-inch-deep earth saucer around each tree to hold water and fill with woodchips or other suitable mulch. Trees shall be nursery grown, balled and bagged, sheared and shaped, of the required height and planted according to accepted horticultural standards. Plant material planted in combination with a constructed berm shall be installed and the berm designed so that sufficient rainfall or irrigation water reaches the root zones of the plants.

(8) At the following locations within required screening areas, evergreen shrubs with a maximum mature height of 30 inches or less shall be provided in lieu of the evergreen trees specified above:

- (a) Within sight triangle easements.
- (b) Within 25 feet of intersections where sight triangle easements are not provided.
- (c) Within 25 feet of access drives.

(9) Waiver. The Board of jurisdiction, after favorable recommendation by the Board Engineer and, if requested, the Environmental Commission and after examination and review, may waive, fully or partially, provisions of this section in heavily wooded areas, in areas unsuitable for plantings or because of other exceptional conditions and/or may require supplementary plantings.

### C. Landscaping.

(1) Topsoil preservation. No topsoil shall be removed from the site or used as spoil, except as may be provided for in a topsoil removal permit issued in accordance with the ordinances of Toms River Township regulating mining operations or excess topsoil remaining after all improvements have been installed in accordance with an approved site plan or subdivision map after topsoil has been redistributed in accordance with this subsection. All topsoil moved during the course of construction shall be redistributed on all regraded surfaces so as to provide an even cover and shall be stabilized by seeding or planting. All regraded areas and all lawn areas shall be covered by a four-inch minimum thickness of topsoil. If sufficient topsoil is not available on the site, topsoil meeting the requirements of the Standard Specifications shall be provided to result in a four-inch minimum thickness.

(2) Tree removal. All tree removal shall be in accordance with the requirements of Article XII of Chapter 348 of the Code of the Township of Toms River.

(3) Protection of trees. No material or temporary soil deposits shall be placed within six feet of any trees or shrubs designated to be retained on the preliminary and/or final plat. Where grading may be required, trees not shown for removal shall be walled in and extension tiled to the outer crown of the tree.

(4) Removal of debris. All tree stumps and other tree parts or other debris shall be removed from the site and disposed of in accordance with law. No tree stumps, portions of a tree trunk or limbs shall be buried anywhere in the development. All dead or dying trees, standing or fallen, shall be removed from the site. If trees and limbs are reduced to chips they may, subject to the approval of the Township Engineer, be used as mulch in landscaped areas.

(5) Slope plantings. Landscaping of the area of all cuts or fills and terraces shall be sufficient to prevent erosion, shall be approved by the Board of jurisdiction and shall be in accordance with applicable portions of Chapter 438, Soil Disturbance, of the Code of the Township of Toms River. All roadway slopes steeper than one foot vertically to three feet horizontally shall be planted with suitable cover plants combined with grasses and/or sodding. Grasses or sodding alone shall not be acceptable.

(6) Selective thinning. Throughout the development, except in areas specifically designated to remain in their natural state, in landscaped or buffer areas, on building lots and in open space areas for public or quasi-public use, the developer shall selectively thin or remove all dead or dying vegetation, either standing or fallen, and shall remove, including grubbing out stumps, all undesirable trees and other growth in accordance with a Tree Management Plan approved by the Township Forester. The developer shall, in accordance with overall site development and his proposed landscaping scheme, provide cleared, graded and drained pathways approximately four feet wide through all public or quasi-public open space in heavily wooded areas. Such pathways should be sited to conform to the existing natural conditions and should remain unobstructed. They are not intended to provide improved walkways but only to provide easy access through open space areas.

(7) Additional trees in single-family and two-family subdivisions. Besides the screening and shade tree requirements, additional trees shall be planted throughout the subdivision in accordance with a planting plan approved by the Planning Board at the time of final approval. The number of trees planted shall be not less than 10 per acre, calculated on the basis of the entire subdivision tract. The variety of plantings may vary from those listed under shade tree requirements and may include flowering types and/or evergreens, not exceeding 30% of the total plantings.

(8) Additional landscaping for nonresidential uses. In conjunction with all uses other than single- and two-family homes, all areas of the site not occupied by buildings, pavement, sidewalks, required screening, required parking area landscaping, required safety islands or other required improvements shall be landscaped by the planting of grass or other ground cover acceptable to the Planning Board and a minimum of two shrubs and one tree for each 250 square feet of open space.

(9) Trees shall be planted with a minimum diameter of two inches breast high.

(10) Waiver. The Planning Board, after favorable recommendation by the Planning Board Engineer, Conservation Officer and Environmental Commission and after examination and review, may waive, fully or partially, provisions of this section in heavily wooded areas, in areas unsuitable for plantings or because of other exceptional conditions and/or may require supplementary plantings.

(11) Specification. All planting, clearing, selective thinning, topsoiling, seeding and other landscaping work shall conform to the applicable requirements of the Standard Specifications.

(12) Landscaping plan. The placement of landscaping shall be in accordance with a landscaping plan submitted with the final plat.

(13) Relocated plantings. Existing plants may be salvaged and/or relocated from clearing areas within the development and utilized to meet the planting requirements of Subsection C(7) and (8), provided that:

(a) Each three items of salvaged and/or relocated plant material shall be considered equivalent to two items of new plant material.

(b) All such salvaged and/or relocated plant material shall be of a type, size and quality acceptable to the Conservation Officer and the Township Engineer.

(c) All such salvaged and/or relocated plant material shall be dug, transported and replanted at a season of the year and using a schedule and equipment, methods and materials conforming to the requirements of the Standard Specifications and subject to the approval of the Conservation Officer and the Township Engineer.

(d) The developer has received the approval of the Conservation Officer and the Township Engineer of the items to be relocated and the schedule and methods of relocation prior to any work of salvaging and/or relocation taking place.

(14) All landscape areas other than single-family lots shall provide an irrigation system acceptable to the Planning Board.

(15) A landscape plan shall be submitted to vegetate clear areas of open space for each application. For the purpose of this section, a "clear area" shall be any area that has an average of less than one tree for each 250 square feet of open space. [The definition of tree is any living deciduous trees having a trunk of a diameter greater than three inches DBH (diameter breast high), any living coniferous tree having a trunk of a diameter greater than four inches DBH or any living dogwood (cornus florida) or American holly (ilex opaca) tree having a diameter of one inch or greater DBH as described in Chapter 471, Trees, § 471-3, Definitions.] This plan shall provide a minimum of one tree for every 250 square feet of open space. Thirty percent of the total can be coniferous (evergreen) and/or ornamental trees. The minimum size for deciduous trees shall be

two-inch caliper with the minimum height for evergreens to be six feet. These trees must meet the standard set by the American Nursery Standards.

D. Shade trees.

All street trees, or those planted along the street in conjunction with a subdivision or site plan, are recommended to be from the following list planted in the manner indicated:

(1) For purposes of this Section, any reference to "small trees" shall include the following trees, which shall be planted 30 feet on center and which shall be planted in accordance with the following: (The reference to "B&B" shall mean balled and burlapped.)

<b>Botanical Name</b>	<b>Common Name</b>	<b>Mature Height (feet)</b>	<b>Planting Height and Method (feet)</b>
Carpinus betulus fastigiata	Pyramidal European hornbeam	35	8 to 10, B&B
Cornus florida	White flowering dogwood	25	8 to 10, B&B
Cornus florida rubra	Red flowering dogwood	20	8 to 10, B&B
Malus baccata	Siberian crab	25	8 to 9, 2" to 2.5" caliper, B&B
Malus scheideckeri 'Superba'	Scheidecker crab	15	8 to 10, B&B
Prunus serrulata Kwanzan	Kwanzan cherry	40	8 to 10, B&B
Pyrus calleryana 'Redspire' Plant Patent No. 3815	Redspire Pear	35	8 to 10, B&B
Sophora Japonica 'Regent'	Regent scholar tree	35	8 to 10, B&B
Ulmus parvifolia	Laceback elm	40	8 to 10, B&B

Species not listed may be approved at the discretion of the Planning Board.

(2) For purposes of this Section, any reference to "average sized trees" shall include the following trees, which shall be planted at a maximum of 40 feet on center and which shall be planted in accordance with the following: (The reference to "B&B" shall mean balled and burlapped.)

<b>Botanical Name</b>	<b>Common Name</b>	<b>Mature Height (feet)</b>	<b>Planting Height and Method (feet)</b>
Ginkgo biloba 'Princeton Sentry' (Plant Patent Number 2726)	Maidenhair tree	75	10 to 12, 2.5" to
Gleditsia triacanthos inermis 'Shademaster'	Shademaster honey locust (or Halka)	60	12 to 14, 2.5" to

Gymnocladus dioicus	Kentucky coffee tree	46	12 to 14, 2.5" to
Tilia cordata 'Greenspire' (Plant Patent Number 2086)	Greenspire linden	60	12 to 14, 2.5" to 3" caliper, B&B
Zelkova serrata 'Village Green' (Plant Patent Number 2337)		60	12 to 14, 2.5" to 3" caliper, B&B

Species not listed may be approved at the discretion of the Planning Board.

(3) For purposes of this Section, any reference to "large trees" shall include the following trees, which shall be planted at a maximum of 50 feet on center and which shall be planted in accordance with the following: (The reference to "B&B" shall mean balled and burlapped.

<b>Name</b>	<b>Name</b>	<b>Approx. Mature Height (feet)</b>	<b>Planting Height and (feet)</b>
Acer rubrum 'October glory'	October glory Red maple	60	12 to 14, 2.5" to 3" caliper, B&B
Cercidiphyllum Japonicum	Katsura tree	45	9 to 10, 2" to 2.5" caliper, B&B
Acer saccharm 'Green Mountain' (Plant Patent Number 21191)	Green mountain Sugar maple	75	12 to 14, 2.5" to 3" caliper, B&B
Platanus acerifolia	London plane tree	80	12 to 14, 2.5" to 3" caliper, B&B
Quercus borealis	Northern red oak	75	12 to 14, 2.5" to 3" caliper, B&B
Quercus palustris 'Sovereign' (Plant Patent Number 2662)	Sovereign pin oak	80	12 to 14, 2.5" to 3" caliper, B&B
Quercus phellos	Willow oak	75	12 to 14, 2.5" to 3" caliper, B&B

Species not listed may be approved at the discretion of the Planning Board.

(4) Planting requirements.

All trees must be planted at the following minimum sizes and in the following manner unless otherwise specified:

- (a) Minimum planting heights:
    - (1) Shade trees: 2 1/2 inches to 3 inches caliper; B&B.
    - (2) Flowering trees: eight feet to 10 feet in height; B&B.
    - (3) Evergreen trees: seven feet to eight feet in height; B&B.
    - (4) Shrubs: 24 inches to 30 inches in height or spread.
  - (b) Tagged with a durable label indicating the genus, species, variety and cultural requirements, including watering and fertilization.
  - (c) Planted in a tree pit that is 12 inches wider than the root ball on all sides, and backfilled with a planting soil mix that is 1/3 leaf compost, 1/3 original soil, and 1/3 topsoil by volume.
  - (d) With a saucer or ring of packed soil around the finished planting hole to catch and hold water.
  - (e) Mulch (four inches thick) applied around each individual or group of trees.
- (5) All shade trees to be hereafter planted in accordance with this chapter shall be nursery grown or of substantially uniform size and shape and shall have straight trunks. The use of ornamental trees as street trees is permitted only under overhead wires and with species with a mature height of 30 feet or less and with lowest branches at 6 feet or higher. In the event that other circumstances arise where the use of an ornamental tree is applicable, a formal request should be made to the Board of jurisdiction for review.
  - (6) All trees planted pursuant to this chapter shall be planted in a dormant state.
  - (7) Subsequent replacement plants shall conform to the type of existing tree in a given area, provided that, if any deviation is anticipated, it must be done only with the permission of the Toms River Township Department of Parks, Buildings and Grounds. In a newly planted area, only one type of tree may be used on a given street, unless otherwise specified by the Toms River Township Department of Parks, Buildings and Grounds. Trees shall be planted with a minimum diameter of 1 3/4 inches to two inches measured at six inches from the ground level.
  - (8) A hole in which a tree is to be planted shall, in each case, be 1/3 larger in width and in depth than the existing root ball of the particular tree to be planted. The hole for a tree to be planted shall contain proper amounts of topsoil and peat moss, but no chemical fertilizer shall be added until the tree has been planted for one year.
  - (9) Any curbed island planter must be a minimum width of 7 1/2 feet. The minimum depth of topsoil in such planters must be one foot for shrubs and two feet for trees.
  - (10) All soils must be of a proper physical and chemical property to support the proposed plant materials.
  - (11) All planting beds must specify a minimum of four inches of mulch shall be used in all nongrassed landscape bed areas.
  - (12) All landscaping should be planted as to not interfere with utility lines, sight triangles, underground utilities or public walkways.
  - (13) All planted landscaped areas must be irrigated with an underground irrigation system.
  - (14) Where practicable, all turf areas located in the front yard area shall be irrigated with an underground irrigation system.
  - (15) A minimum of 30% of all planted shrub material must be either flowering material or ornamental grasses capable of withstanding typical streetscape areas.

- (16) All vegetative species used in landscaped areas must be tolerant to local conditions to reduce maintenance through the use of fertilizers, pesticides and frequency in irrigation during drought conditions. A list of recommended landscape materials is offered below.
- (a) Ornamental grasses:
- (1) *Penisetum alopecuroides*.
  - (2) *Miscanthus sinensis*.
  - (3) *Miscanthus sinensis* 'Variegatus'.
  - (4) *Miscanthus sinensis* 'Yaku Jima' (dwarf).
- (b) Flowering shrubs:
- (1) *Spirea bumalda* 'Anthony'
  - (2) *Hydrangea macrophylla* 'Nikko Blue'.
  - (3) *Potentilla fruticosa*.
  - (4) *Spirea bumalda* 'Gold Flame'.
  - (5) *Viburnum*.
  - (6) *Hypericum patulum*.
- (c) Perennials:
- (1) *Coreopsis* 'Moonbeam'.
  - (2) *Sedum* 'Autumn Joy'.
  - (3) *Veronica spicata* 'Sunny Border Blue'.
  - (4) *Rudbeckia fulgida* 'Goldstrum'.
  - (5) *Hemerocallis* 'Stella D'Oro'.
- (17) In areas adjacent to salt water, such as bays, brackish rivers or lagoons but not located in a riparian zone and/or riparian easement, plantings shall be of the following kinds of trees:
- (a) *Zelkova* (*Zelkova serrata*).
  - (b) Japanese scholar tree (*Sophora japonica*).
- (18) In the upland, which is away from rivers, bays and lagoons, and not adjacent to large bodies of water, plantings shall be one of the following kinds of trees:
- (a) Sugar maple (*Acer saccharum*).
  - (b) *Sassafras* (*Sassafras albidum*): must be single-trunked, nursery grown and planted only in the spring.
  - (d) Callery pear (*Pyrus calleryana*): any cultivar except Bradford.
  - (e) *Zelkova* (*Zelkova serrata*).
  - (f) Hophornbeam (*Ostrya virginiana*).
  - (g) Silver linden (*Tilia tomentosa*).
  - (h) Littleleaf linden (*Tilia cordata*).
  - (i) London planetree (*Platanus acerifolia*).
  - (j) Hardy rubber tree (*Eucommia ulmoides*).
  - (k) Japanese scholar tree (*Sophora japonica*).
  - (l) Ginko (*Ginko biloba*).
- (19) In areas adjacent to freshwater rivers and lakes but not located in a riparian zone and/or riparian easement, plantings shall be one of the following kinds of trees, except in riparian zones:
- (a) Blackgum (*Nyssa sylvatica*).

- (b) Sweetgum (*Liquidambar styraciflua*).
  - (c) London planetree (*Platanus acerifolia*).
  - (d) Hardy rubber tree (*Eucommia ulmoides*).
  - (e) Japanese scholar tree (*Sophora japonica*).
  - (f) Sugar maple (*Acer saccharum*).
- (20) On outer beaches, both oceanfront and bay front but not located in a riparian zone and/or riparian easement:
- (a) Oak species: Red (*Quercus rubra*), Willow (*Quercus phellos*), Chestnut (*Quercus prinus*), Pin (*Quercus palustris*) and Scarlet (*Quercus coccinea*) are subject to special approval by the Planning Board.
- (21) All shade trees shall be planted in accordance with the landscaping requirements of the Standard Specifications.

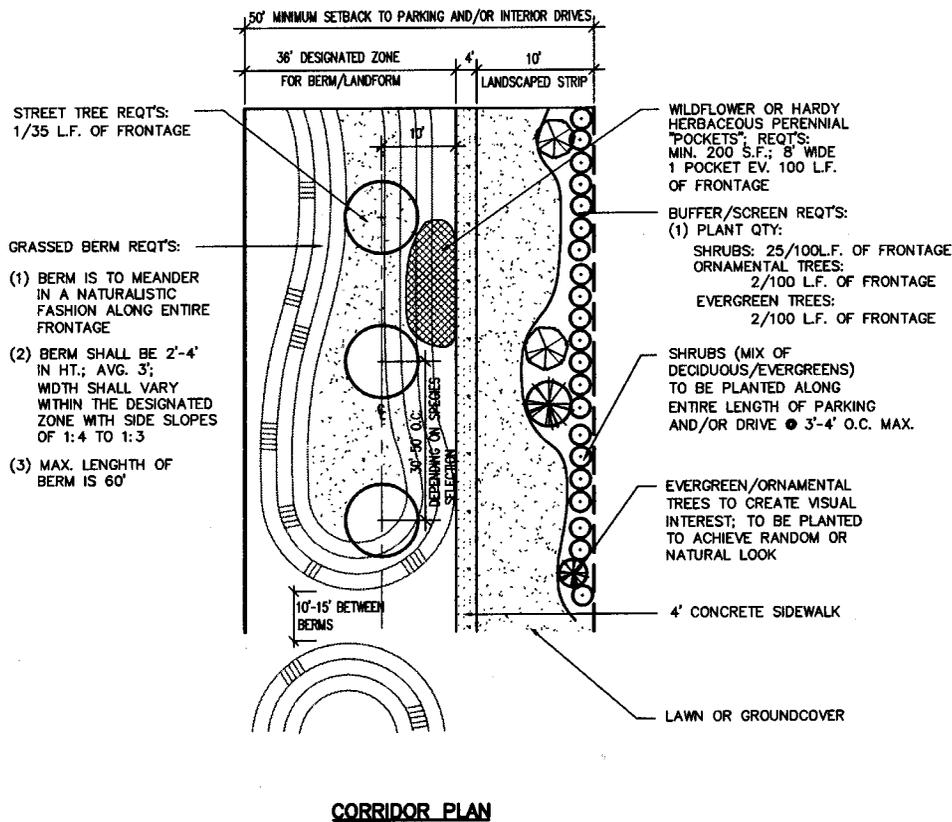
#### E. Corridor Landscape Design Standards.

These standards apply to all properties fronting on NJ Route 9, NJ Route 37 and NJ Route 70 and located in the Highway Business (HB), Rural Highway Business (RHB) Industrial (I) and Light Industrial (LI) zoning districts. They shall apply specifically to the area within 50 feet of the highway right-of-way line. All subdivision and site plan applications involving such properties shall provide a landscape plan that demonstrates compliance with these standards. If unique site-specific circumstances such as wetlands, existing vegetation, or unusual lot configuration preclude the installation of any of the prescribed landscaping elements, the applicant shall provide an alternative plan that incorporates as many elements as is feasible.

1. General Corridor Plan – Diagrams 1 and 2 depict the overall design concept to be achieved along the corridors.
2. Planting Details (General) – Plant selection should conform to the following general design principles:
  - (a) All landscape plants shall be typical full specimens conforming to the American Association of Nurserymen Standards (ANA) for quality and installation.
  - (b) Local soil conditions and water availability shall be considered in the plant selection. All plants shall be tolerant of specific site conditions. The use of indigenous species may be appropriate.
  - (c) Landscaping shall not inhibit access by emergency vehicles or inhibit visibility within required vehicular sight triangles.
  - (d) Irrigation systems are to be provided for all new plantings.
  - (e) An appropriate variety of tree species shall be provided to avoid die-out due to species-specific diseases.
3. Street Tree Details – Street trees shall be provided in accordance with the following:
  - (a) Placement of street trees shall conform to diagrams 1 and 2.
  - (b) The number of street trees shall average one for every 35 linear feet of property frontage.
  - (c) Spacing between trees shall be determined based upon species selection. In general, trees should be between 30 and 50 feet on center.
  - (d) Trees should be a minimum of three and one-half inches caliper, based on ANA standards.
  - (e) Trees are to be disease resistant and tolerant of road salts and air pollution.
  - (f) On properties with more than one tree species, species shall not be alternated one-by-one; instead a single species shall be grouped together to create a canopy effect.
  - (g) Branching height shall bear a relationship to the size and species of tree but shall have a minimum clearance height of seven feet above grade before branching begins.

- (h) Acceptable street tree species shall be chosen from the list of street trees and planted in accordance with subsection D above.
- (i) Unacceptable trees include:
- *Acer platanoides* - Norway Maple: roots grow near surface and can uproot sidewalks.
  - *Acer saccharinum* - Silver Maple: tree has weak branches and is susceptible to various insects and diseases.
  - *Plantus occidentalis* – American Sycamore: Excess litter.
  - *Liquidambar* – Sweetgum: Excess Litter.
  - *Pyrus Calleryana* ‘Bradford’ – Bradford Callery Pear

**Diagram 1**

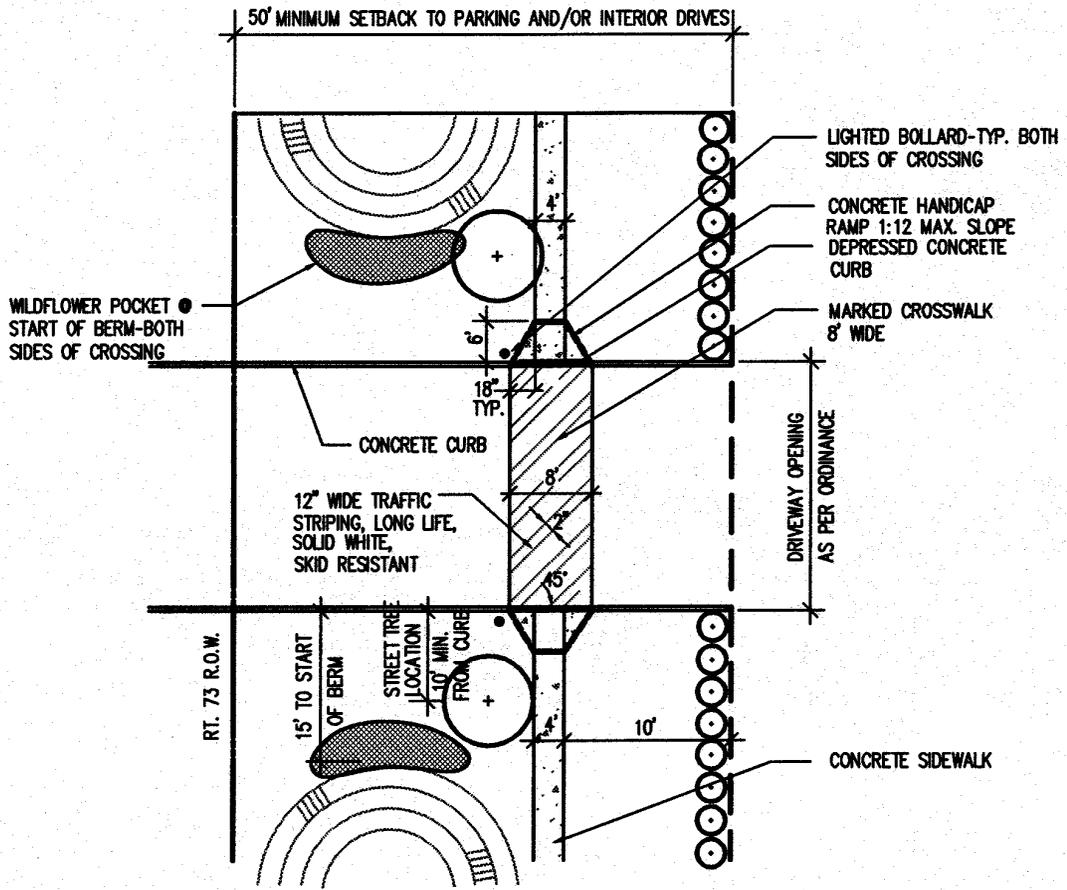


4. Buffer Details – A landscaped buffer shall be provided in the last 10 feet of the setback area in accordance with the following:
- (a) A shrub mass of deciduous and/or evergreen species shall be planted within the required buffer area to provide for a visual and physical screen of a minimum of three feet in height along the entire frontage to mask the view of parking lots and minimize headlight glare. Shrubs within the buffer shall primarily include evergreen species, although deciduous plants may be used provided that their use does not result in significant visual openings during the winter season. This landscape mass shall be interspersed with the required ornamental and shade trees to provide for a natural, random and visually interesting plant scheme.
  - (b) Location, placement and spacing of plant material shall conform to diagrams 1 and 2.
  - (c) Selection of plants species shall provide for a variety and mixture of plant types. Varieties shall consider susceptibility to disease, shapes, seasonal display, textures, flowers, and foliage.
  - (d) The plant quantities constituting the buffer shall include:
    - (i) Shrubs averaging 25 per 100 linear feet of frontage.
    - (ii) Ornamental trees averaging two per 100 linear feet of frontage.
    - (iii) Shade trees averaging two per 100 linear feet of frontage.

- (iv) Lawn or groundcover to complete the required 10-foot wide landscape buffer outside of the required shrub/tree planted area.
  - (e) The planting mass of the mix of shrubs/trees shall be mulched to a depth of three inches in a continuous bed.
  - (f) Required plantings in the buffer area shall meet the minimum size requirements as follows:
    - (i) Shrubs: planted size is to be a minimum of 36 inches in height.
    - (ii) Ornamental trees: planted size is to be a minimum of two and one half inches caliper measured at one foot above the top of the root ball.
    - (ii) Evergreen trees: planted size is to be a minimum of five feet to six feet in height.
    - (iii) Shade trees: planted size to be a minimum of three and one half inches caliper measured at one foot above the root ball.
5. Flower Pocket Details – Flower pockets shall be provided in accordance with the following:
- (a) Location and placement of flower pockets shall conform to diagrams 1, and 2.
  - (b) A minimum of 200 square feet of wildflowers and/or perennials constitutes one pocket. One pocket shall be provided per 100 linear feet of frontage with additional pockets provided at driveway crossings.
  - (c) Wildflowers, if used, are to be hardy and native regional mixtures. Mixture selection shall provide for a blend of species in approximate equal amounts. Mixtures shall include a variety of colors. The selection of mixtures should consider the existing soil conditions. The specific blend is subject to the approval of the Board in consultation with its professionals. Wildflower pockets shall be mowed once a year. Mowing shall occur in the late fall while the wildflowers are dormant.
  - (d) Perennials shall be hardy and include either a mix of colors or single stands of one color. Perennials shall be approved by the Board in consultation with its professionals.
7. Grass Berm Details – Grass berms shall be provided in accordance with the following:
- (a) Berms shall be limited to the areas indicated in diagrams 1 and 2.
  - (b) Berms are to be both vertically and horizontally meandering to achieve a naturalistic landscape by de-emphasizing the linearity of the highway corridor. Requirements for berm design are noted in diagrams 1 and 2. Berms are not to be continuous for the entire length of the frontage but shall allow for breaks as indicated in diagram 1. Berms are not to be terminated abruptly at the ends of the lot lines but are to transition to existing grade in a naturalistic fashion.
  - (c) Berm design shall not adversely affect natural drainage or impair access to rain or irrigation water by plant materials.
  - (d) Berms at driveway openings should conform to diagram 2.
8. Sidewalk Details – A continuous sidewalk or multi-purpose path shall be provided in accordance with the following:
- (a) The location and placement of a sidewalk shall conform to diagrams 1 and 2 as applicable.
  - (b) Standard Township construction details for the sidewalk shall be utilized and shall be approved by the Township Engineer.

9. Driveway Crossing Details – The following elements and standards apply to all driveway crossings. Driveway crossing treatment is necessary to warn both pedestrians and motorists of each other’s presence. Certain elements contained herein will provide visual cues to motorists that pedestrian crossing zones are nearby. The arrangement of the design elements is depicted in diagram 2. Additional elements and standards specific to the driveway crossings are set forth below.
- (a) Painted crosswalks shall be provided in accordance with the following:
    - (i) Location and placement of painted crosswalks shall conform to diagram 2.
    - (ii) Standard Township construction details for such striping shall be utilized and shall be approved by the Township Engineer. In the event that the Township has not adopted such standards, then generally accepted engineering standards, as set forth in engineering and construction manuals shall be used as approved by the Township Engineer.
    - (iii) Painted crosswalks shall be skid-resistant.
  - (b) Handicapped ramps shall be provided in accordance with the following:
    - (i) Location and placement of handicapped ramps shall conform to diagram 2 as applicable.
    - (ii) All sidewalks and multi-purpose paths shall taper down to meet grade at the intersection with a driveway. Ramps shall be provided in these areas to allow for full accessibility as per Americans with Disabilities Act (ADA) guidelines. Standard Township construction details for such ramps shall be utilized and approved by the Township Engineer. In the event that the Township has not adopted such standards, then generally accepted engineering standards, as set forth in engineering and construction manuals shall be used as approved by the Township Engineer
  - (c) A raised median shall be provided if the driveway opening into the developed property exceeds two lanes and shall conform to the following:
    - (i) Median shall be placed at the centerline of all new driveways extending from the intersection with the corridor right-of-way to the 50 foot minimum setback line required for parking and/or interior drives into new developments.
    - (ii) Median shall be a four-foot wide brick paver island edged by a six-inch vertical granite block curb.
    - (iii) Brick shall be a four-inch x eight-inch rectangular shape and placed in a herringbone pattern. Brick color shall be a red/charcoal blend.
    - (iv) The median shall allow for an opening at the crosswalk locations. Location and placement of crosswalks shall conform to diagram 2.
  - (d) Bollards shall be provided wherever a sidewalk engages a driveway in accordance with diagram 2. Bollards shall conform to the following:
    - (i) Lighted bollards shall be located and placed to warn both pedestrians and motorists of each other’s presence at the crosswalks. Lighted bollards will provide visual cues to motorists.
    - (ii) Lighted bollards shall be a minimum 36 inches in height with a 100-watt metal halide or high-pressure sodium lamp. Bollards should provide a minimum maintained illumination level of 0.5 footcandles in the crosswalk area.

**Diagram 2**



**DRIVEWAY CROSSINGS:**