

KENT COUNTY ROAD COMMISSION BOARD POLICY

No. 506 Effective Date On Going

Revised Date 2/12/19

Tree Planting

Policy authored by the Engineering, Maintenance and Traffic and Safety Divisions

The Kent County Road Commission (the Commission) strives to preserve the natural beauty inherent to Kent County's tree-lined roads, maintain compliance with federal and state air quality standards, support wildlife, and enhance the safety of road users. Aligned with these objectives is the Commission's Tree Planting Policy, which provides guidelines for planting and maintaining trees in highway right-of-way under the Commission's jurisdiction.

The Commission has full authority over all planted or naturally growing trees, plants, and shrubs within the highway right-of-way and reserves the right to remove vegetation, including trees, from the right-of-way at any time.

Property owners are encouraged to plant new trees outside of the right-of-way and check for additional private utility easements that may be located on the property. This will help reduce adverse impacts to drainage facilities, avoid utility conflicts, and protect against possible future disturbance caused by highway reconstruction or improvement projects.

Property owners may plant trees within the highway right-of-way only after a permit has been issued by the Commission.

- All trees planted within the right-of-way must meet the specifications outlined in the Commission's Tree Planting Policy with regard to species, distance from the roadway, and spacing
- Property owners are responsible for the maintenance and trimming of trees planted within the right-of-way adjacent to their property

Be advised that in Municipalities and Townships where trees are required to be planted within the highway right-of-way, said Municipalities and Townships shall be responsible for any and all KCRC expenses related to said tree.

The Commission's Roadside Tree Guide, which lists acceptable and unacceptable species to plant, is included with this policy.



Tree Planting Guidelines

- Property owners are encouraged to plant new trees outside of the right-of-way and check for additional private utility easements to reduce adverse impacts to drainage facilities, avoid utility conflicts, and protect against possible future disturbance caused by highway reconstruction or improvement projects.
- Property owners are responsible for the maintenance and trimming of trees planted within the right-of-way adjacent to their property
- Property owners should check with their local municipality regarding any local ordinance that may include additional planting requirements and/or restrictions.
- Property owners may plant trees within the highway right-of-way only after a permit has been issued by the Commission.
- Trees may not be planted within 20 feet of catch basins, manholes, culverts or other drainage structures/facilities.
- Trees may not be located within the 20 feet of road-edge underdrain pipes, usually placed in areas with heavy soil types (i.e. clays, silts, etc.).

Site Selection:

Safety is the main consideration when planting, and selecting the proper location to plant trees enhances safety. Proper locations will vary depending on the type of roadway, width of right-of-way, and placement of utilities.

Please Note:

Figures A through G provide cross-section guides showing the minimum requirements for actual landscape design.

- Each project will have its own unique features, restrictions, and limitations based on site topography, street alignment, right-of-way width and centerline location within the right-of-way.
- When possible, trees will be planted in a manner to avoid the "row effect."

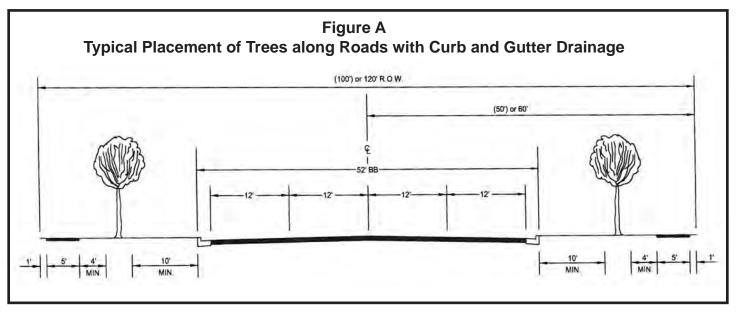
Location and Spacing:

Each variety of tree has a definite environmental niche. Before developing the landscape plan for a project, the following factors should be taken into account in order to determine the most appropriate tree variety for the site.

- 1. Spacing needed
- 2. Drainage
- 3. Topography
- 4. Soil Type
- 5. Physical obstructions
- 6. Exposure and slope
- 7. Root spread
- 8. Shade tolerance
- 9 Mature height
- 10. Maintenance materials (salt) tolerance

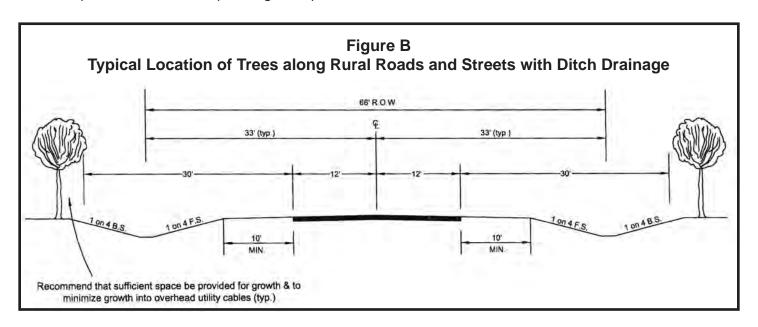
Roads with Curb and Gutter Drainage

On roads with curb and gutter drainage, trees should not be planted any closer than ten feet to the curb (see Figure A). When possible, trees should be kept away from sidewalks or separate (Class I) non-motorized pathways.



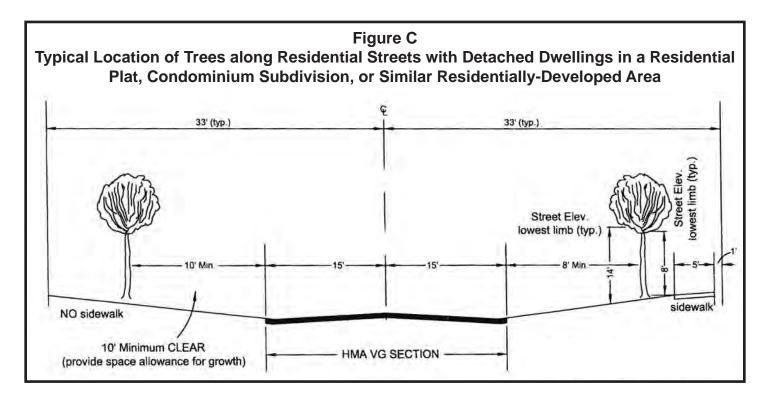
Roads without Curb and Gutter Drainage

Along roads without curb and gutter drainage, trees are to be planted no closer than 30 feet from the traveled portion of the road (see Figure B).



Residentially-Developed Area

Figure C shows the typical location of trees along residential streets with detached dwellings in a residential plat, condominium subdivision, or similar residentially-developed area. When trees are located in the space between the edge of pavement and the sidewalk, they must be planted at least 8 feet from the edge of pavement (i.e. 23-24 feet from centerline of a 66-feet-wide right-of-way) or greater than 44 feet from centerline, in conformance with spacing requirements from street intersections.

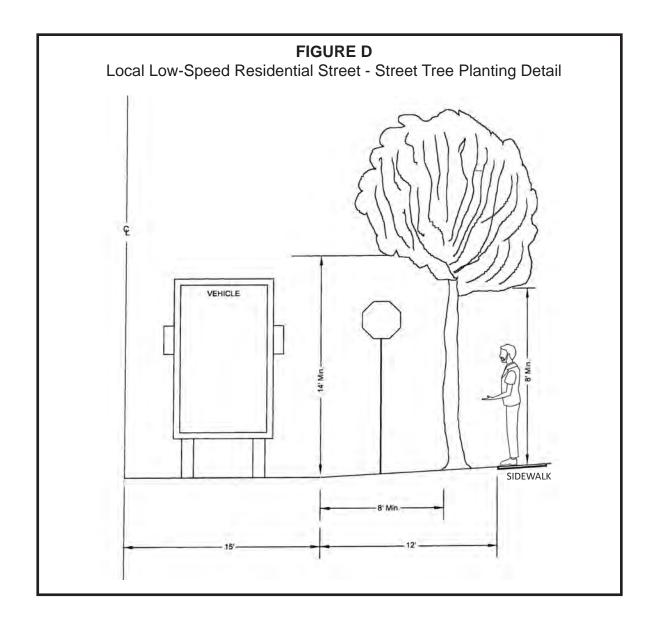


Utilities

For typical utility locations, see Appendix A, Location of Utilities in New Platted Streets, from the KCRC's Plat Development policy.

Sidewalks or Separate Non-Motorized Pathways

Trees should be kept away from sidewalks or separate non-motorized pathways whenever possible. In residential developments with sidewalks, trees should be at least 8 feet, about 9 feet to center, between the tree trunk and the edge of the pavement or the back of curb (Figure D).



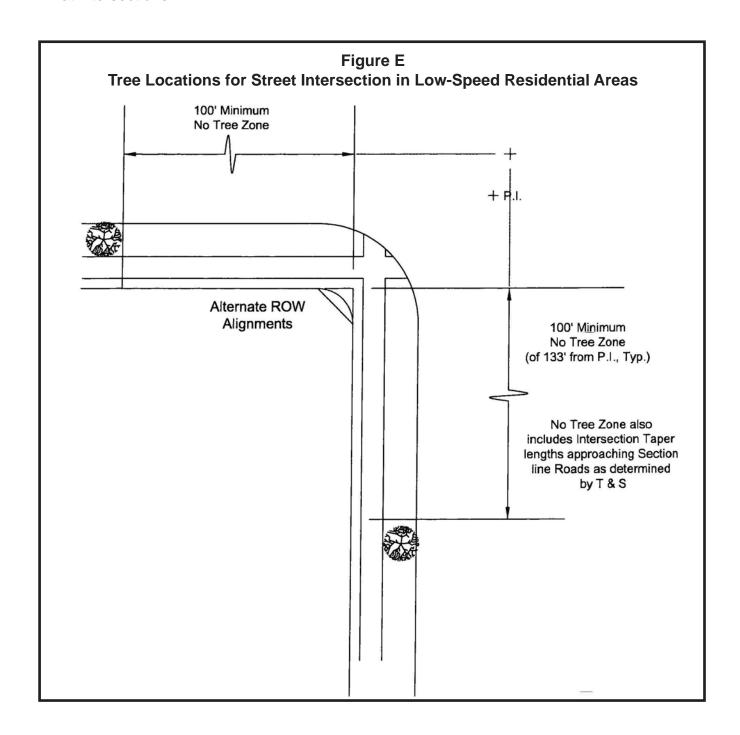
Commercial/Industrial/High-Density Residential Development

Planting new trees along a public street in a commercial or industrial plat or condominium subdivision or similarly developed, including medium and high density residential land use, should be located the space between 33-34 feet from centerline of a 86-feet-wide right-of-way, or greater than 54 feet from centerline, in conformance with spacing requirements from street intersections.

Intersections

Location of planting in relation to an intersection will be based on individual intersection design, sight distance, and safety standards. Generally, trees will be located

- At least 100 feet away from the intersection of intersecting right-of-way lines
- No closer than 50 feet from each other between intersections and outside of any vision corners at intersections



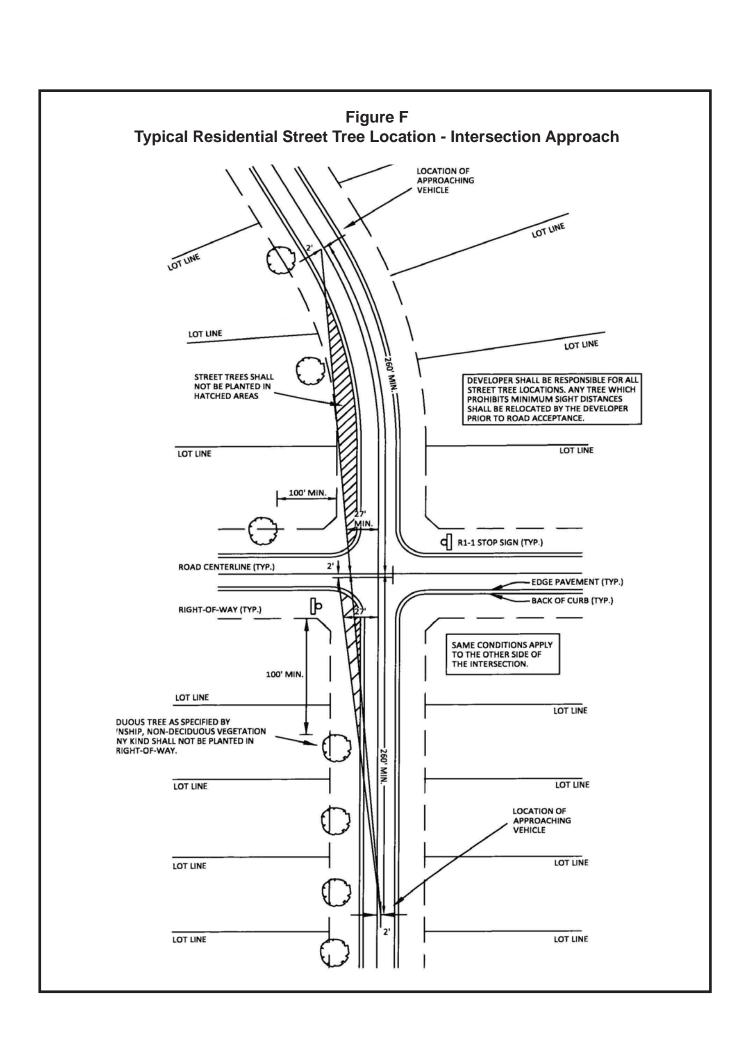
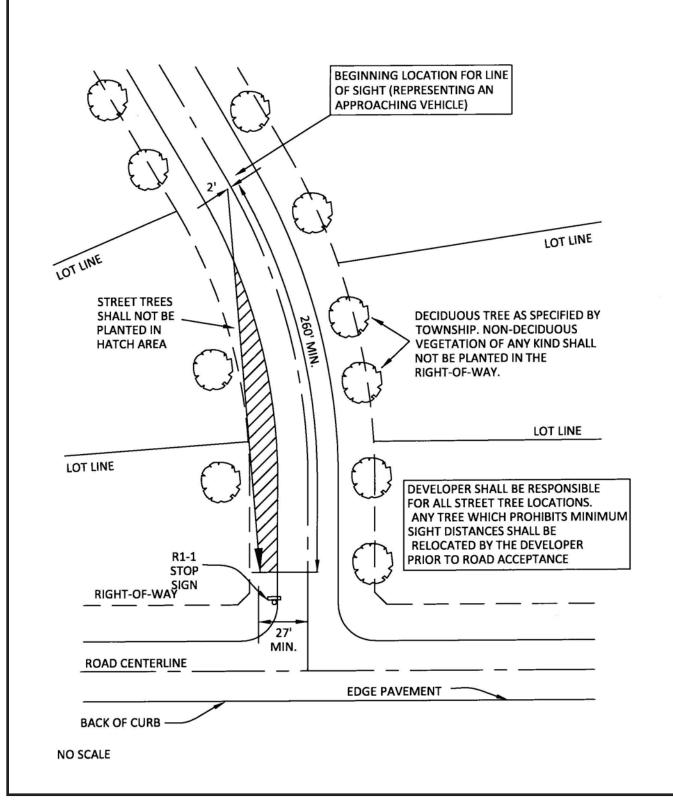


Figure G
Typical Residential Street Tree Location - Stop Approach





Acer platanoides - Emerald Queen Norway Maple

This hardy maple cultivar has been one of the most widely used tree species. It grows well in a wide range of soil types and its umbrella shaped crown does accommodate low utility wires. Poorly drained clay soils and areas that receive heavy winter salting should be avoided. The tree also

should only be planted in terraces larger than five feet in width.

Acer platanoides - Crimson King Norway Maple

The deep maroon foliage of this tree makes it very striking. It is somewhat small than other varieties of Norway Maple, reaching a mature height of only 35 feet. This allows it to grow very well under low utility lines. As with other Norway Maples, it is sensitive to road de-icing salts and to poorly drained clay soils. Its slow growth and small size do make it a good choice for planting in narrow terraces.

Acer platanoides - Columnare Norway Maple

This Norway Maple cultivar is ideally suited for planting in extremely narrow terraces or where screening is desired. It grows to a height of 40 feet, but its upright branch habit gives a crown spread of only twelve to fifteen feet. Low utility lines are difficult to trim around with this species and should be avoided, as should poorly drained clay soils and heavily salted areas.

Acer rubrum - Red Sunset Red Maple

Best known for its brilliant fall color, this maple is becoming a real favorite. It grows rapidly, reaching a mature height of sixty feet and has an upright branch habit. It is extremely hardy and grows well in all soil types. The Red Maple is however, salt sensitive and does require a large planting area. Terraces smaller than six feet in width should be avoided. Trimming can be done around utility lines with relative ease.

Gleditsia triacanthos inermis - Skyline Locust

This is a stately and graceful tree that withstands all urban conditions. Its wide branching habit makes it a good choice under low utility lines. It is salt tolerant and able to survive in a wide range of soil conditions. The locust does have a large root system that requires ample terrace space.

Ostryva virginiana - Hop Hornbeam

The Hornbeam is a relatively slow growing medium sized shade tree. It grows best in a light sandy soil where it can receive periodic watering throughout its first few years. After it is established, it withstands drought conditions very well. The slender upright branches have a beech like foliage that is attractive in the fall. It can be planted in terraces larger than four feet in width with no difficulty.

Pyrus colleryana - Bradford Pear

The Bradford Pear is an exceptionally hardy and attractive tree. It will tolerate most soil conditions, is not salt sensitive, and is virtually pest free. During the spring a small white flower is produced and during the fall the leaves turn yellow, orange, and maroon. The branch habit is upright, but the tree should not be planted under low utility lines. The tree does have a wide and low crown and is best used in a large terrace. Best transplantation success is realized in the spring.

Tolia cordata - Greenspire Linden

This Linden variety grows well only in a rich, well-drained soil. Its crown is very compact and conical shaped. At maturity it stands about fifty feet tall. The Greenspire Linden is best used in a medium sized terrace where no trimming for overhead wires will have to be done. The tree is also extremely salt sensitive and streets receiving periodic salting should be avoided.

Tilia x euchlora - Crimean Linden

This Linden variety has a larger leaf than the Greenspire and seems to be somewhat hardier. It still requires a well-drained soil and a medium sized terrace for best growth. It is also very salt sensitive like the Greenspire cultivar. The Crimean Linden grows to a sixty-foot height and has an open conical crown that is much less compact than Greenspire. Both cultivars are best suited to spring plantings.

Zelkova serrata - Village Green

Japan has introduced this Elm-like shade tree to us. It grows best in a large terrace with a well-drained clay soil. Its vase shaped crown does allow for easy line clearance. To most people this tree is a carbon copy of our American Elm, but the species is not in the Elm family and, therefore, not susceptible to Dutch Elm disease.

Sophora japonica - Regent

Often called a pagoda tree, this small shade tree is extremely hardy. It has a large oval crown of dark green foliage that bears a small white flower in mid-summer. Its large crown dictates a large terrace area and it may be difficult to allow for vehicular clearance on terraces less than eight feet in width. The pagoda tree also has a low salt tolerance. Transplant survival is much better in the spring that it is in the fall.

Unnacceptable Species

These species may <u>not</u> be planted within the Kent County Road Commission right-of-way:

Ash Species

Box Elder

Conifers (i.e evergreens, pines, cedars, spruce, etc.)

Chinese Elm

Elm Species

Fruit Trees

Oak Species

Poplar Species

Bushy-type Shrubs

Silver Maple

Willow Species