

## VEGETATION MANAGEMENT

All Utilities must submit an annual Vegetation Management Schedule for each of the Department's seven (7) districts, (DOT FORM 413VEG), to perform any vegetative maintenance activities on any PERMITTED Utility Facility that encroaches the State Highway System; *or the Utility must submit individual site plans for the planned maintenance activities each year, in conformance with the General Requirements of this policy.*

Vegetation Maintenance Activities include Mowing, Chemical Control, and Pruning and Tree Removal.

Utilities requesting NEW Utility Facility Encroachment permits shall be required to include a mitigation (landscape) plan with their Encroachment Permit Application for facility crossings on Interstate and Limited Access Highways. (See Section 2)

### 1. ANNUAL SCHEDULE FOR VEGETATION MANAGEMENT

- (A) Submittal Requirements and Procedures: Submit one Vegetation Management Schedule for each maintenance activity, annually, for all of the existing and new right of way encroachment sites in each of the Department's seven districts (see [Appendix ??](#) for a District Boundary Map). The utility can choose to submit one schedule for all three maintenance activities or submit up to three separate schedules. This will depend on the utility's maintenance plan. If a utility only has facilities within one District, only one schedule has to be submitted. The Vegetation Management Schedule may be requested from and shall be submitted to the District Utilities Engineer's Office. The District Utilities Engineer shall review the schedule and forward it to their designated personnel responsible for utility encroachments. Upon receiving an approved schedule, including any conditions stated therein from the Department, the Utility should have a one-year schedule to perform approved maintenance activities.
- (B) Alternative Compliance: Should the utility choose not to submit a districtwide Vegetation Management Schedule in conformance with policy requirements, then submit to the District Utilities Engineer an alternative compliance request and site plan for each encroachment site in the district. The District Utilities Engineer shall review the request for approval. The request shall state policy(s) for which alternative compliance is sought, hardship, and proposed alternative maintenance activities. Each site plan shall contain the following: A plan at 1"=20'-0" scale showing the utility area, state route, mile post, right of way line; the existing vegetation, in and adjacent to, the site; and a maintenance schedule on the plan indicating the specific activities that are to occur. The maintenance schedule shall indicate, but may not be limited to, specific activities that are to occur, such as which trees are to be pruned, what chemicals are to be used, how cut material will be disposed of, how often mowing shall occur, and what control procedures shall be used for exotic species.
- (C) Emergency: In the event of an emergency, the utility will establish communication with the Department to report the location(s) of possible damaged areas, degree of damage and other available information. Communication should be established as soon as practical but no later than 4 hours after the onset of the emergency.

### 2. NEW UTILITY FACILITY ENCROACHMENT PERMITS ON INTERSTATE / LIMITED ACCESS ROUTES

Submit, for review and approval, a landscape mitigation plan with each new Utility Facility Encroachment Permit application that involves interstate / limited access roadways. The landscape mitigation plan shall be in addition to the site development plan provided with the permit application. The mitigation plan shall conform to the Maintenance Requirements (Section 4) of this policy, the General Mitigation Plan Requirements (Section 2.C) and the GDOT Standard Specifications (Ch. 702-Vine, Shrub and Tree Planting and Maintenance). Mitigation installation shall be completed within 12 months of any vegetation management activity.

(A) Utility Crossings:

1. A minimum of one (1) small growing/sub-canopy hardwood tree shall be required for each 350 square feet, or fraction thereof, of the vegetation management zone that is disturbed. Trees shall be spaced a minimum of 14 feet apart. Vegetation shall be planted in natural groupings, not in rows, at the edges of the vegetation management zone to create vegetative tapering (see Figure 1). Tree mitigation shall not be required for lines with vegetation management zones less than 45 feet in width.
2. Small growing/sub-canopy vegetation that is to be preserved within the Department's vegetation management zone, may serve as credit for the required trees to be planted. One preserved is equal to one required.
3. A minimum of forty-five percent (45%) of the disturbed vegetation management zone shall be planted with native shrubs. The shrubs shall be planted in natural groupings, not long rows. Shrubs shall be spaced in order to achieve 100 percent (100%) coverage within the natural grouping in two growing seasons. Spacing guidelines for determining shrub quantities for a given area are:

Spacing	S.F.
12"	1
18"	2.25
24"	4
36"	9
48"	16
60"	25
72"	36
84"	49
96"	64

(S.F. = square foot coverage)

[for example: 45% of the required landscape area (4,500s.f.) is 2,025 s.f.; you request to plant wax myrtles at a 96" spacing: 2,025 s.f. divided by 64 s.f. equals 32 wax myrtles that are required to be planted.]

4. All areas of the disturbed vegetation management zone that are not planted with native shrubs shall be grassed. Mowable areas (slopes 3:1 or less) shall be planted with a permanent turf grass (Bermuda). Non-mowable areas (slopes greater than 3:1) shall be planted in accordance with the Department's Standard Specifications, current edition, Section 700 – Grassing, and Section 161 – Control of Soil Erosion and Sedimentation.

(B) Parallel Utility:

1. The utility may perform vegetation removal operations up to a 20-foot width on the right of way. If circumstances require, the Engineer may instruct greater than 20 feet.
2. Native grasses shall be seeded within the 20-foot vegetation management zone if buffered by existing groups of vegetation on the right of way and if slopes are unmowable. Turf Grass (Bermuda) shall be planted when no vegetation buffer exists and slopes are mowable. (See Figure 2a)
3. When a vegetation buffer that averages less than 15 feet in width remains on the right of way, adjacent to a cleared vegetation management area, the Engineer may instruct the utility to remove the remaining vegetation, and grass as per standard specifications, at no cost to the Department.

(C) General Mitigation Plan Requirements: (the mitigation plan, if required, should be attached to the Annual Schedule Form DOT-413VEG)

1. The scientific name, common name, size, quantity and location of the proposed plant material.
2. Schedule: A maintenance schedule that includes the erosion control measures to be taken, the beginning planting date and completion date, the proposed chemicals to be used, and the establishment activities for a period of two growing seasons from the date of planting.
3. Replacement: After the first and second growing season, the utility shall replace any mitigation materials that are not in a healthy acceptable condition or did not survive. The replacement materials should be of like size and variety as specified on the mitigation plan, or other NATIVE material acceptable to the District Enhancement Coordinator or designee.
4. Quality: All vegetation management activities on the right of way shall include the use of regionally native plants and minimize runoff. General requirements are:
  - a. All plants installed shall be healthy and conform to the American Standard for Nursery Stock.
  - b. All trees, if used, shall be 1 ½ to 3-inch caliper.
  - c. All shrubs, perennials and vines shall be a minimum of three (3) gallon material.
  - d. All plant material shall be guaranteed for two growing seasons at installation and an additional one-year guarantee on replacement plants. Trees planted for mitigation requirements or other planted vegetation cannot be subsequently removed and must be in a healthy acceptable condition to be accepted.

3. NEW UTILITY FACILITY ENCROACHMENT PERMITS ON NON-INTERSTATE / NON-LIMITED ACCESS ROUTES

- (A) This section applies to utility crossings and parallel encroachments on all other routes that are not included in Section 2 above.
- (B) No mitigation plan shall be required. However, any disturbed areas shall be grassed according to section 2.A.4 for utility crossings and section 2.B. for parallel encroachments.

4. MAINTENANCE REQUIREMENTS:

- (A) Notification: Give the District Utilities Engineer, or designee, a minimum of 48-hour notification prior to any scheduled vegetation management activity on the right of way. Provide a minimum of five (5) working days notification of any changes to the approved Annual Permit.
- (B) Seasonal Limitations for Planting: Seasonal limitations for planting activities shall conform to standards established in Section 700 under Sub-Section 700.04A (Department's Standard Specifications, current edition). For Zones 1 and 2, planting shall only be done between the dates of October 15 and March 15. For Zones 3 and 4, planting shall be done between November 1 and March 1. Permanent grassing, tree removal, tree pruning, chemical mowing and chemical activities may be performed in accordance with this policy, at any time, upon approval from the Department.
- (C) Pesticides: Chemical control shall meet all State and Federal regulations. Chemical control, (i.e., spraying) may be used on vegetation 48 inches or less in height or any height if mowed in the previous 12 months. Chemical maintenance programs shall be supervised by a certified pesticide applicator. All chemical applications shall be used in accordance with State and Federal rules and regulations. Application rate shall not exceed the manufacturer's recommendations. All spraying will be done in accordance to State and Federal Regulations (i.e. do not violate maximum wind speed). All applicators shall wear proper safety attire as recommended by the chemical instructions. Broadcast spraying is limited to areas approved by the Annual Permit. Aerial applications are prohibited. The utility shall repair any damage that is a result of mishandling or misuse of materials at the utility's expense and to the satisfaction of the Engineer.

- (D) Pruning and Removal: All pruning and removal activities shall be performed under the supervision of an ISA Certified Arborist. Local Governments are exempt from this requirement if the local government's employees perform the work. All trimming and pruning activities shall be in accordance with the most current ISA tree trimming and pruning guidelines.
1. Crown reduction of pine trees is limited to lateral limbs. Cutting the leader of mature wood constitutes topping and is prohibited. Pruning which removes more than 1/3 of the canopy of a tree and/or leaves the tree with unnatural symmetry is prohibited. (If this type of activity is contemplated, removal should be considered, see Figure 2b)
  2. Within right of way mowable areas, tree stumps and roots projecting through or appearing on the surface of the ground shall be removed to a depth of 6 inches below the average contour of the ground surface. Removal shall be accomplished by means of stump grinding equipment designed for this purpose, or by hand. Blasting or pushing the stumps out with bulldozers shall not be permitted. Holes or voids created by the removal of stumps shall be filled, graded and compacted with acceptable fill material. In areas where stumps are adjacent to grass areas, sod shall be used to repair the bare spots created by the stump removal, areas damaged by equipment and/or currently exposed on site. In non-mowable areas stumps may remain at a maximum of four (4) inches above the ground line.
  3. All work shall be done without damage to native trees and shrubs that are to remain in the vegetation management zone or are adjacent to the vegetation management zone. All work shall be done without damage to existing site conditions. No work shall occur on right of way sites designated as ENVIRONMENTAL SENSITIVE AREAS (ESA) until the necessary Army Corp of Engineers permit(s) are acquired by the utility. Contact the District Utilities Engineer to obtain the ESA locations within the District.
- (E) Mechanical Mowing: The Department will mow all utility right of way encroachment areas that are in an acceptable condition, have a solid stand of turf grass (Bermuda), are mowable areas, and are contiguous to existing right of way turf grass. Mowable areas are slopes of 3:1 or less. The utility will maintain encroachment areas containing vegetation, other than turf grass, and/or having slopes greater than 3:1 that are within the utility's easement (areas that the Department can not mow). Native grasses and/or natural vegetation less than 48 inches in height may be mowed.
- (F) Erosion Control: The utility is responsible for slope and swale maintenance of right of way areas affected by the utility's vegetation work. The utility will adhere to all Department, state and federal erosion control requirements at all times. If the Environmental Protection Division (EPD) or their representative requires a plan submittal from the utility for land disturbance within the right of way, then a copy of the said plans shall be submitted to the District Utilities Engineer.
- (G) Debris Removal: Properly dispose of all waste and debris and leave the site in an acceptable condition on a daily basis. When completed, the work site must be clean of all litter and debris created by the utility and, if a mowable area, acceptable for mowing by conventional mowing equipment. Cut trees and shrubs must be ground/mulched in their entirety and removed from or spread evenly on the site. Ground/mulched material spread on site shall not exceed a three (3) inch maximum depth. Mulched material shall not be spread on grassed areas. Natural debris shall not be discarded onto adjacent property without permission of the landowner.
- (H) Unsatisfactory Work: Unsatisfactory work shall be promptly corrected by the utility within fifteen (15) working days after notification by the Department. Unsatisfactory work deemed a safety hazard or causing erosion shall be halted and corrected immediately (within 8 hours) to the satisfaction of the Engineer. If necessary, the Department will correct unsatisfactory restoration work, and its cost reimbursed by the utility prior to any future vegetation management schedules being approved or any new utility facility encroachment permits being issued by the Department.

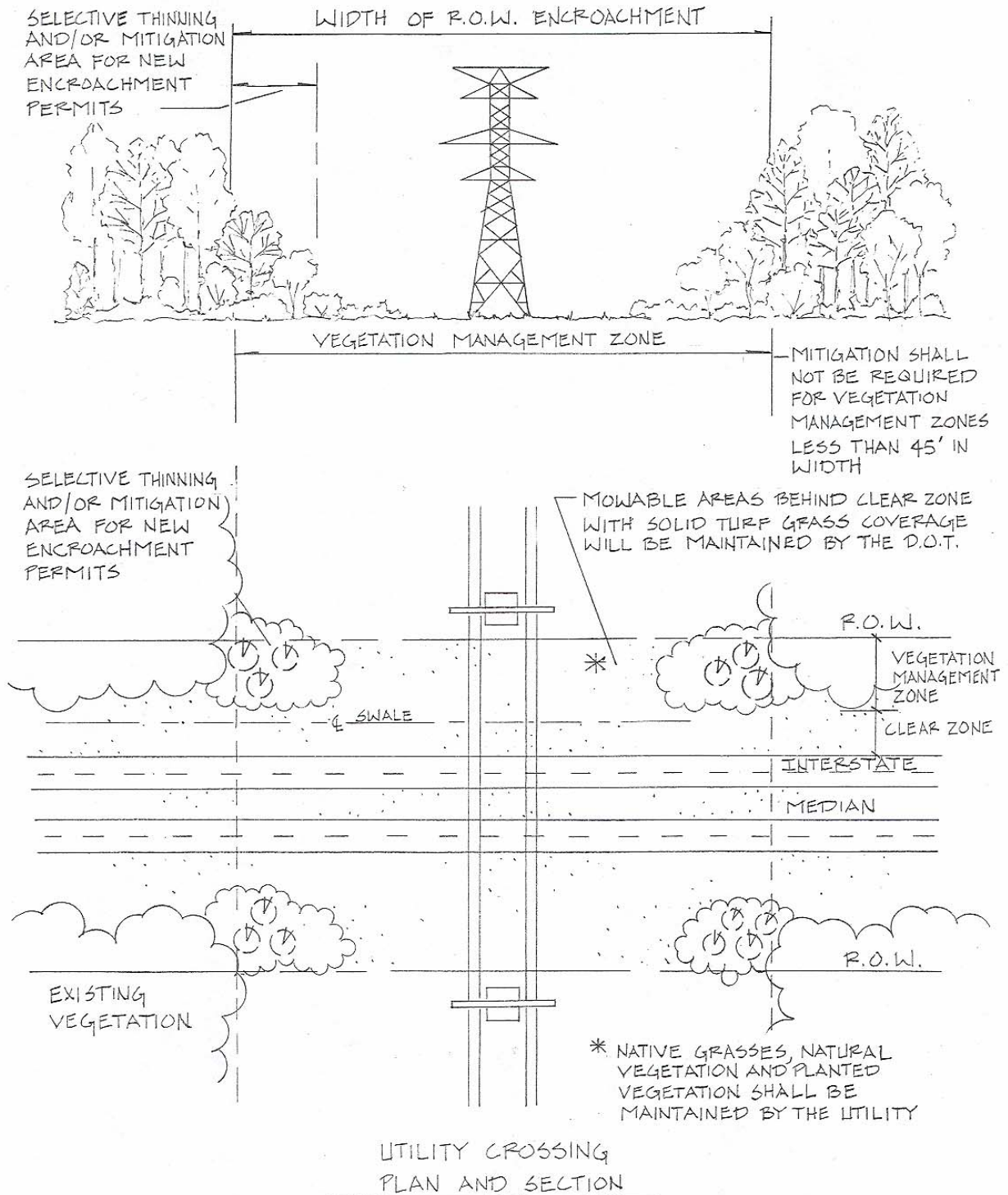
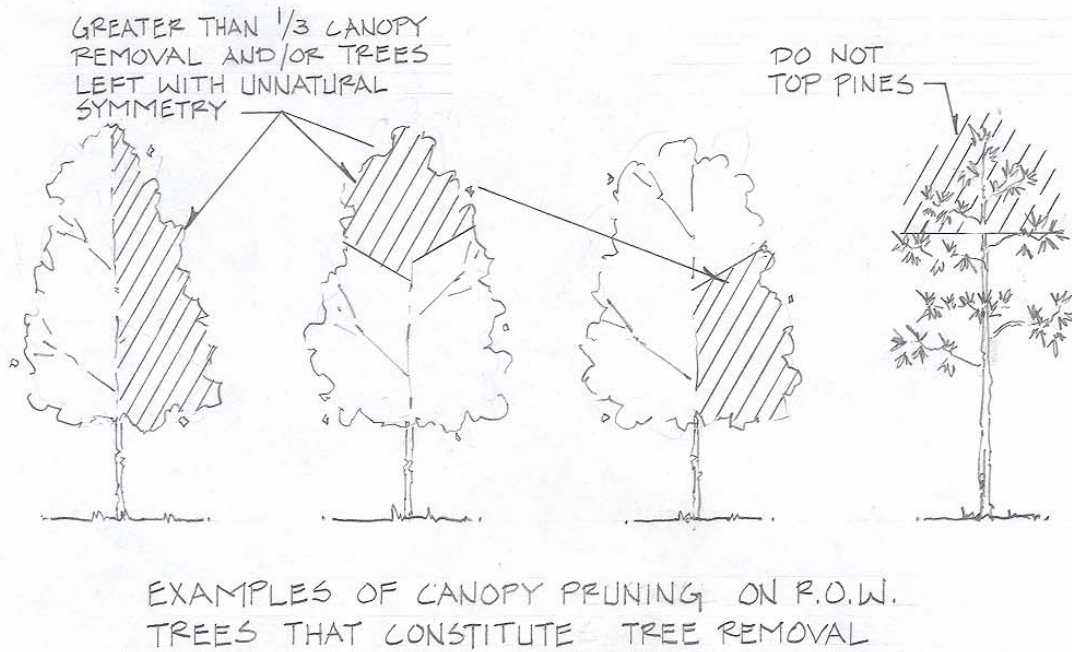
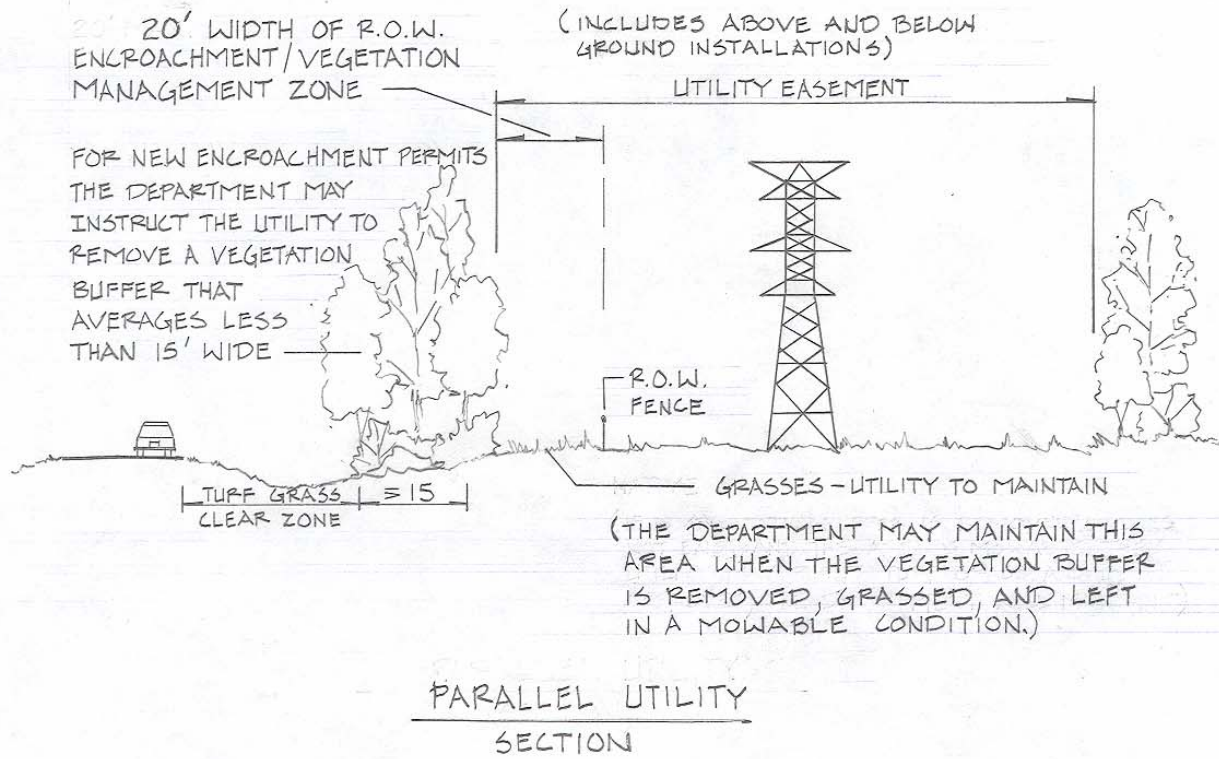


FIGURE 1





FIGURES 2a & 2b

## VEGETATION MANAGEMENT DEFINITIONS:

Acceptable Condition:	The area is clear of debris and obstructions to conventional mowing and/or maintenance practice, plant materials conform to the American Standard for Nursery Stock, Permit conditions, and the Department's Standard Specifications.
Crown Reduction or Cutting Back:	The specific cutting back of a branch or leader to a lateral branch at least one-third to one-half diameter of the cut being made. Pruning designed to reduce the crown of a tree or individual branch. Sometimes referred to as heading back, drop crotch pruning, natural pruning, lateral pruning or directional pruning in an effort to keep the natural symmetry of the tree on the sides as well as the top.
Effectively Destroy:	To cause, allow or permit any act that will cause a tree to die or go into a period of unnatural decline within a period of one (1) year from the date of the act. Acts which may effectively destroy a tree include, but are not limited to: damage inflicted unto the root system by heavy machinery; excessive pruning; severing the leader or leaders; stubbing mature wood; changing the natural grade above the root system or around the trunk; damage intentionally inflicted on the tree permitting infection or pest infestation; application of herbicides or other chemical agents; intentional fire damage to the tree permitting infection or pest infestation; the infliction of a trunk wound that is fifty (50) percent or greater of the circumference of the trunk; or the removal of sufficient canopy to cause the unnatural decline of the tree.
Emergency:	A sudden or unforeseen occurrence involving a clear or imminent danger to life, health, or property; the interruption of utility services; or repairs to transportation facilities that require immediate attention.
Exotic Pest Plants:	Non-native, invasive plants also called noxious weeds, which are a problem in natural communities and ecosystems on public & private land. In general, these plants have the potential to disrupt the natural landscape-invading forests, glades, barrens, wetlands and other natural areas as well as stifle agriculture production and timber growth. Examples: Kudzu ( <i>Pueraria lobata</i> ), Princess tree ( <i>Paulownia tomentosa</i> ), Privet ( <i>Ligustrum sinense</i> and <i>vulgare</i> ), Mimosa ( <i>Albizia julibrissin</i> ), Japanese honeysuckle ( <i>Lonicera japonica</i> ).
Extraordinary Circumstances:	Circumstances other than normal operating conditions, which exist and make it impractical or impossible for a utility to comply with the provisions of this section/policy. Such extraordinary circumstances may include, but shall not be limited to, hurricanes, tornadoes, floods, ice and snow, and acts of God.
Hatrack or Topping:	To flat cut the top or sides of a tree or the severe reduction of branches without consideration for specifications for cutting back in an effort to keep the natural symmetry (sides as well as top) of the tree; to sever the leader or leaders or to prune a tree by the stubbing of mature wood.
Mitigation/Restoration:	Vegetative restoration of the site to make the impact of the vegetation management activities milder or less severe. Vegetation management activities often involve forest canopy and ecosystem losses and require mitigation on site to the fullest extent possible.
Prune:	The removal of plant parts, dead or alive, in a careful and systematic manner so as to not damage other parts and the health of the plant.
Shrub:	A woody plant smaller than a tree usually having multiple permanent stems branching from or near the ground.
Tree/ Tree Canopy:	Any living, self-supporting, dicotyledonous or monocotyledonous woody perennial plant which normally grows to an overall height of no less than ten (10) feet in Georgia. Tree Canopy is the upper portion of the tree consisting of limbs, branches and leaves.

Vegetation: All woody and herbaceous plants either naturally occurring or planted.

Vegetation Management: All planned work activities relating to landscape and roadside development on the right of way. These activities may include the removal and/or pruning of trees or other vegetation, landscape planting, construction and any maintenance management of their related features. (i.e. mowing, chemical control and pruning and tree removal)