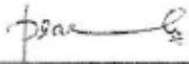
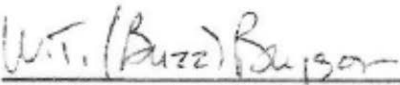


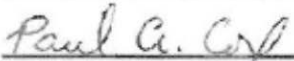
**PROGRESS ENERGY CAROLINAS  
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TRANSMISSION PROJECTS SECTION**

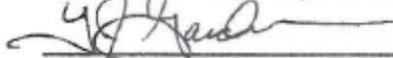
**CONSTRUCTION SPECIFICATION  
T4 SPECIFICATION  
SECTION 15  
RIGHT-OF-WAY PREPARATION**

**Part 1  
Right-of-Way Clearing**

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Transmission - Technical Specifications & Standards

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Transmission Line Engineering

  
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Transmission Right of Way

Approved By:   
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Transmission - Technical Specifications & Standards

SEE NEXT PAGE FOR ALL REVISIONS TO THIS DOCUMENT

**PROGRESS ENERGY CAROLINAS  
TRANSMISSION DEPARTMENT  
TRANSMISSION PROJECTS SECTION**

**CONSTRUCTION SPECIFICATION  
T4 SPECIFICATION  
SECTION 15  
RIGHT-OF-WAY PREPARATION**

**Part 1  
Right-of-Way Clearing**

**REVISIONS**

<u>Revision #</u>	<u>Date</u>	<u>Prepared By</u>	<u>Approved By</u>	<u>Page(s) Affected</u>
1	5/23/01	Paul Cox	Tommy Barbour	(Sect. 4.12.1) changed minimum time to stabilize soil from 30 days to 15 days.
2	3/21/05	Eddie Taylor		<u>Sections: 2.0. 3.2. 5.1.5. 6.1. and 6.2</u> <u>2.0 Definitions</u>  3.2 Other Services under <u>Materials and Services Furnished by Company</u>  5.1.5 General under <u>Clearing details</u>  6.1 Clearing Methods under <u>Clearing and Disposal Methods</u>  6.2 Disposal Methods under <u>Clearing and Disposal Methods</u>
3	4/20/05	Eddie Taylor		Section 6.2.2 – Chipping (Removed 3 inch diameter and 3 foot length wording for woody vegetation remaining in Right of Way)
4	3/29/06	Eddie Taylor		Section 4.12 - Erosion Control. Revised 15 working days as the limit for establishing ground cover on slopes exposed during right of way clearing activities to 21 calendar days.
5	2/1/11	Prasad Yenumula	Mike Kirkland	Sections 1, 2, 3, 4, 5, 6

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**PROGRESS ENERGY CAROLINAS  
RIGHT-OF-WAY CLEARING  
GENERAL SPECIFICATIONS  
DATED FEBRUARY 2011**

**1.0 PURPOSE**

The following specifications are for initial right-of-way clearing associated with the construction of transmission lines on the Progress Energy Carolinas (PEC) system. These specifications should serve as guidelines for clearing and removing trees, brush, and other woody vegetation growing on the transmission right-of-way, in preparation for construction of the transmission line. Clearing should minimize erosion; impacts to streams, wetlands and other sensitive areas; not impede line construction activities; and leave the corridor with an acceptable appearance. The specifications are designed to comply with applicable state and federal laws and regulations, and with PEC's other transmission specifications. The specifications are not intended to cover all details but should serve as guidelines for the clearing operations. PEC is committed to fully complying with all applicable environmental laws and regulations. Should there be any uncertainty or lack of clarity regarding whether any right-of-way clearing activity is in full compliance with applicable laws and regulations, the appropriate PEC project management and/or environmental permitting and compliance personnel should be contacted prior to proceeding with that activity. Such contact information is provided in the project-specific scope documents.

**2.0 DEFINITIONS**

**2.1 Initial Clearing** - Applies to transmission line right-of-way being cleared for the first time.

**2.2 Company** - Progress Energy Carolinas (PEC).

**2.3 Contractor** - Right-of-way clearing contractor.

**2.4 Designated Representative** - An authorized representative of Company acting as a liaison between the Company and the Contractor regarding all clearing activity. This representative will inspect and review the Contractor's clearing operations to assure that this procedure's intent is followed.

**2.5 Environmental Law** - Any federal, state or local law, statute, ordinance, rule, guideline, judicial or administrative order or other public authority now in effect or hereafter enacted relating to (1) the regulation or protection of human health, safety, occupational safety and health, the environment or natural resources or (2) any Regulated Substance.

**2.6 Release(s)** - With respect to any substance or material, means any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of such substance into the environment, or any other act or event the occurrence of which would require containment, remediation, notification or similar response under any law.

**2.7 Regulated Substance** - Any chemical, material, substance or waste regulated by any law or governmental agency.

**2.8 Clearing Plan** - Drawings and data furnished by the Company specifying location and type of clearing.

- 2.9** **Danger Trees** - Trees adjacent to the right-of-way whose height plus five feet equals or exceeds the distance from the tree's base to the nearest conductor or a point on the ground directly underneath the nearest conductor.
- 2.10** **Erosion Control Plan** - Drawings and data prepared by the Company outlining erosion and sedimentation control measures for individual transmission projects. These plans must be approved by the appropriate regulatory authority in either North Carolina or South Carolina.
- 2.11** **Buffer Zone** - A strip of land adjacent to a wetland, stream or other water body, the width of which is typically measured outward from the regulated jurisdictional boundary [e.g., "ordinary high water mark" (OHWM, which is normally the stream bank or boundary of full pool on lake)], and which entails special clearing conditions. These conditions, which are specified in the clearing plan, typically include selective cutting of vegetation and limited use of heavy equipment. Buffers typically extend 20 feet from wetland boundaries, 30 feet from the OHWM for "non-regulated" streams (streams without specific buffers imposed by regulations) and 50ft for regulated streams (streams with specific buffers imposed by federal, state or local regulation). Unless described differently in the clearing plan or marked otherwise in the field, buffers run parallel to the stream or wetland boundary.
- 2.12** **Selective Clearing** - Clearing only that woody vegetation which would hamper construction activities or pose an immediate threat to the transmission line.
- 2.13** **Work Area** - The immediate work area, such as each tract of woods which is cleared continuously without moving equipment or labor to another location. This does not necessarily include the entire line length.
- 2.14** **Individual Tree** - A tree (greater than 4 inches in diameter and 12 feet in height) which must be treated separately after cutting from most other trees during the clearing operation. These trees usually occur in hedge or fence rows, pastures, yards, etc.
- 2.15** **Sensitive Areas** – Areas that include wetlands and streams; archeological and cultural sites; rare, endangered and threatened species sites; conservation easements; and buffers. The archeological and cultural sites fall under a narrower group of culturally sensitive areas and all other areas fall under environmentally sensitive areas.
- 2.16** **Mats** – Mats are commercially constructed wood or synthetic structures to be used primarily in wetlands to avoid potential impacts to wetlands. The expected performance standard is that the wetland functions remain intact. The ROW clearing should not substantially disturb the root mat, nor use mechanized pushing, dragging or similar activities that redeposit excavated soil material. The use of heavy equipment in these areas is precluded except on mats. Timber mats (brush mats or cord mats or mats from non-bound, non-consolidated material) are not acceptable.
- 2.17** **Low Ground Pressure Equipment** - Equipment that does not affect the functioning of the wetland (e.g., does not cause ground disturbance or compact wetland soils as described in definition 2.16).
- 2.18** **Heavy Equipment** - Conventional equipment, not specifically designed to work in sensitive areas such as wetlands, and which generally would degrade the functioning or other aspects of those areas (e.g., damage wetlands or areas containing cultural/archeological resources).

- 2.19 Woody Vegetation** – Any tree trunk, limb, branch, or part thereof. Includes all brush, refuse, or debris.

### **3.0 MATERIALS AND SERVICES FURNISHED BY COMPANY**

#### **3.1 Materials**

**3.1.1** The Company will furnish the Contractor with copies of Access Road Maps, Plan & Profile drawings, regulatory permits, Right-of-Way Preparation Specifications, Right-of-Way maps, Weekly Progress Report Forms, inventory forms, and a Right-of-Way Clearing Plan designating where various types of clearing requirements and/or constraints apply. The Company will identify wetlands and other sensitive areas on the Plan and Profile as well as the Clearing Plan. The Plan & Profile drawings and maps that are furnished to the Contractor are for orientation purposes only and do not represent conditions that might exist when clearing begins.

**3.1.2** Permission to clear right-of-way parcels will be furnished in writing as the property is released. Parcels released will be identified from property line to property line based on the center line station number and as shown on the Right-of-Way map. The Contractor shall not enter upon any property until written notification is released.

#### **3.2 Other Services**

**3.2.1 Marking of Features on Transmission Projects** –Survey stakes are installed by PEC to locate the center line, establish flagging for right of way clearing limits, and correlate locations on the Plan and Profile drawings. The Contractor shall preserve all survey center line control points including Points on Tangent (POT's) and Points of Intersection (PI's) and protect all flagged stakes during clearing operations. The Contractor will be responsible for the replacement cost of POT and PI markers if they have been moved or destroyed due to carelessness.

Flagging and survey stakes are also used to mark environmentally and culturally sensitive areas, and will be installed by PEC prior to the contractor beginning work. Blue flagging will be used to mark environmentally sensitive areas and any specific access/impacts constraints within these areas noted in the clearing plan. Similarly, yellow flagging will be used to mark culturally sensitive areas, and any constraints noted in the clearing plan. It is the responsibility of the contractor abide by listed constraints, and to protect and not destroy the flagging and stakes. A contractor, or any of their sub-contractors, may temporarily un-tie and take down flagging to perform their work according to PEC specifications, but all flagging must be reinstalled at its original location at the end of each day. If any survey flags marking sensitive areas are left torn down and not restored by the contractor, or any sub-contractors working for the contractor, the contractor shall pay all costs for PEC survey crews to re-install the survey stakes and/or flagging.

Typically, 20ft buffers are used from the edge of the delineated wetland boundary. These buffers are laid out parallel to the edge of wetlands using the blue flags and survey stakes. The buffers typically extend 30ft for non-regulated streams, and 50ft for regulated streams. No buffers are used for the culturally sensitive areas.

If the survey stakes have deteriorated or been removed before clearing, the Contractor shall notify the Designated Representative and if the Designated Representative concurs

that the survey is destroyed beyond recognition, the Company will replace the survey. If Contractor fails to have the Designated Representative confirm that the survey is destroyed, the survey will be replaced at the Contractor's expense.

Violation of constraints that apply to water/wetlands or cultural/archeological resource areas will be subject to PEC contract conditions and, where applicable, to civil or criminal penalties imposed by local, state and/or federal agencies having jurisdictional oversight.

**3.2.2 Inspection and Inventory** - Inspections of contractor work for compliance with this procedure, other applicable procedures, and contract conditions, will generally take place during the clearing and upon completion of a section of a line. An inventory and inspection will be made at the convenience of the Designated Representative together with a Contractor's representative. The Designated Representative may request the Contractor to furnish a crew that will accompany him on inspections and inventories. If the right-of-way clearing was not performed to specifications, the Contractor shall be notified and required to begin production corrections within five (5) days after notification and continue until completion.

#### **4.0 CONTRACTOR RESPONSIBILITIES**

**4.1 General** - The Contractor is responsible for the right-of-way until completion and final acceptance by the Company. The Contractor shall take all precautions necessary and shall bear all risk of loss or damage. The Contractor will furnish all necessary equipment, tools, labor, transportation, and supervision to clear the right-of-way according to these specifications and applicable federal, state and local laws and regulations. The Contractor shall confine all activities, including equipment storage, to the right-of-way limits, "lay down" areas, and designated construction access points, except for cutting danger trees. The Contractor shall comply with all restrictions in the right-of-way clearing work package furnished by the Company.

**4.2 Relations with the Public** - The manner in which the Contractor deals with people and their properties while performing this work is extremely important to the Company. Therefore, the Contractor and the Contractor's representatives shall manifest a spirit of friendliness and cooperation when dealing with property owners and the general public while performing work under this specification.

**4.3 General Safety** - Extreme care and diligence shall be exercised by the Contractor to assure the safety of persons, animals, and property. If at any time the Designated Representative determines that Contractor's methods or equipment are inadequate for securing the safety of the Contractor's or the Company's employees or the public, the Designated Representative may direct the Contractor to take specific actions to ensure safety. The Contractor shall improve methods as deemed appropriate by the Designated Representative without additional cost to the Company, so as to assure compliance with the Company's safety concerns. Failure of the Designated Representative to make this demand shall not relieve the Contractor of any obligation to ensure the safe conduct of its work.

The Contractor shall maintain all lights, guards, signs, temporary passages, or other precautions necessary for the safety of all persons. The Contractor shall abide by all safety rules and construction conditions required by governmental authorities and other entities, including railroads, so the public is safeguarded from accidents and delays. Guards and flags required by governmental or railroad authorities shall be provided at the Contractor's expense, unless directed



otherwise by the Designated Representative. Contractor shall at no time compromise either safety or environmental requirements.

- 4.4 Safety Procedures Involving Overhead Lines** - The Contractor shall prevent trees and brush from touching existing overhead lines and is held responsible for informing personnel of the hazards involved. Should a Company electric line or any electric equipment be damaged or service interrupted by the Contractor's activities, the Contractor shall immediately cease all activities in the area and notify the Designated Representative to report the location of the damage. If the Designated Representative is not available, the Contractor shall immediately report the accident to the Company Customer Service Center, Power Outage Reporting Line, at 1-800-419-6356. Failure to notify the Designated Representative or the Company Customer Service Center of this damage may result in a repair delay and a commensurate increase in the Contractor's liability. The Contractor shall not proceed with work until specifically directed by the Designated Representative.
- 4.5 General Environmental** - The Contractor shall comply with all environmental laws and regulations.
- 4.6 Solid Waste** - The Contractor shall keep the premises free from solid waste at all times and shall provide suitable containers on all equipment for solid waste disposal.
- 4.7 Releases** - The Contractor shall not release any regulated substance on Company property or right-of-way or on any roadways leading to or from Company property or right-of-way. In the event the Contractor releases any material or substance on Company property or right-of-way, the Contractor immediately shall notify the Designated Representative and/or PEC environmental compliance personnel and remediate the release pursuant to all applicable Environmental Laws and at Company's direction and to Company's reasonable satisfaction.
- 4.8 Permits** - The Company will obtain required permits and post any related notices required for the transmission line construction. The contractor will comply with conditions of both environmental and non-environmental permits. Should the permits' conditions be in conflict, the contractor will contact the Designated Representative, Environmental Support personnel, or project manager prior to proceeding.
- 4.9 Ingress and Egress** - The Contractor shall confine all activities to public roads, the Company's land or rights-of-way, and other specifically identified locations (e.g., temporary construction entrances). The Company shall provide ingress and egress to a transmission line right-of-way from a public road and then up and down the right-of-way insofar as possible. Travel within the ROW may, where specified in the clearing plan, require traversing buffer zones and associated wetlands/water bodies. In these areas and adjacent buffer zones, the Contractor shall use only a route designated by the Designated Representative or not traverse the area. If the Contractor desires to approach the right-of-way by private property not previously identified on the clearing plan (such as driveways, farm lanes, or roads), the Contractor shall work with the Designated Representative to acquire access rights. No access shall be cut from limited or controlled access roads or highways such as an interstate highway. The Contractor shall use the substation access road for all access to substations unless prior approval for other access is obtained from the Designated Representative.
- 4.10 Property Damage**
- 4.10.1** Extreme care and diligence will be exercised by the Contractor to assure that property damage is kept to an absolute minimum. The Contractor shall be responsible for taking all

necessary precautions to prevent damage or injury to the property or efforts of the Company or other contractors. The Contractor, at the Contractor's own expense, shall repair or replace any such damage.

**4.10.2** Should a property owner make a complaint resulting from acts or omissions of the Contractor, the Contractor shall, as directed by the Designated Representative and at the Contractor's sole expense, repair the damaged property to its original condition or to the property owner's satisfaction or shall otherwise make a settlement and obtain a release within ten (10) calendar days. If this is not done, the Company may settle the complaint and deduct the amount from the Contractor's payments.

**4.10.3** The Contractor shall do no more crop damage on the right-of-way than is absolutely necessary. Extreme care and diligence must be exercised to assure that crop damage is kept to an absolute minimum. The Contractor is to notify the Designated Representative of all crop damage on a right-of-way, and the Company shall settle any claim for that damage with the property owner. If, in the opinion of the Company, the damage on the right-of-way is excessive and needless, then the Contractor will be held responsible. Otherwise, the Company is responsible for normal crop damage.

**4.10.4** The Contractor shall be held solely responsible for any and all damage claims off the right-of-way. Any damage to culverts, driveways, roadways, bridges, or buildings incurred during right-of-way clearing, either directly or indirectly by Contractor's operations, shall be promptly repaired at the Contractor's expense. All such repair work shall restore the damaged property to its original condition or to the property owner's and Designated Representative's satisfaction. The Contractor is responsible for keeping the private roadways accessible during clearing operations when used by the Contractor's employees.

#### **4.11 Clean Up**

**4.11.1** The Contractor shall clean up and restore all property in the work area to original condition or to the Designated Representative's satisfaction (on and off the right-of-way) immediately upon completion of the work in each work area, and in full compliance with all regulatory standards and requirements. Work areas will be specified by the Designated Representative. Each area must meet the Designated Representative's acceptance before final payment for that area will be made. If the Contractor fails to maintain a clear work area or to promptly clean up and restore property after the completion of work, the Company may perform or arrange to have performed the clean up and restoration. If the Company incurs any cost in performing this work, that cost times a factor sufficient to cover the Company's applicable administrative and general overhead costs shall be paid to the Company by the Contractor or deducted by the Company from any amount owed to the Contractor.

**4.11.2** Any temporary buildings, embankments, cofferdams, etc. built for clearing purposes shall be removed by the Contractor upon completion of all work. The Contractor shall fill all excavations as directed by the Designated Representative and shall remove all equipment. The Contractor shall dispose of all refuse materials at locations approved by Designated Representative. Concrete refuse shall not be dumped in ditches, whether public or private.

#### **4.12 Erosion Control**

**4.12.1** Visible off-site sedimentation is prohibited by state law. The Contractor is responsible for compliance with the Company's state-approved erosion control plan, including

implementing sufficient erosion control measures to contain sedimentation. A ground cover sufficient to prevent erosion of any graded or exposed soil shall be provided within 15 calendar days after soil disturbing activities are completed. Any damage to slopes or terraces, on or off the right-of-way, shall be repaired immediately to prevent erosion or the likelihood of erosion. Particular care shall be taken before leaving each work area that it is in compliance with the approved plan. Where specified by erosion control plan, project clearing plan, or Designated Representative, portions of the right-of-way shall be seeded according to the seeding specifications on the detail sheet in the approved plan.

**4.12.2** The Contractor's equipment and clearing method shall minimize ground disturbance and changes to ground topography. In no case is the contractor authorized to clear any areas or utilize clearing methods not specifically identified in the clearing plan and erosion control plan. If the Designated Representative determines that excessive damage is occurring, the Contractor will be held responsible to restore pre-existing conditions and prevent further damage. In certain adverse weather conditions, the Contractor may be required by the Designated Representative to make an equipment or operator change, hand clear as described in Section 6.1.2, or suspend clearing operations in those areas until heavy equipment operation can be resumed without causing excessive damage.

**4.12.3** The Contractor shall conduct its operations in compliance with all measures outlined in the Erosion Control Plan approved by the appropriate regulatory agency in either North Carolina or South Carolina. A copy of the approved Erosion Control Plan will be provided to the Contractor by the Company. The Contractor shall keep a copy of the approved Erosion Control Plan on site at all times.

**4.12.4** During clearing activities, the Designated Representative will make periodic inspections of the erosion control measures outlined in the Clearing Plan and the approved Erosion Control Plan. To the extent the Contractor is responsible for the installation of erosion control measures, the Contractor will be held responsible for such installation and maintenance of controls, and for correcting any noncompliance with the controls and other requirements of the erosion control plan to the Designated Representative's satisfaction. The Contractor, whether or not responsible for the installation of the erosion controls, is responsible for any damage to the erosion control devices.

#### **4.13 Fences**

**4.13.1** The Contractor shall respect the private ownership of fences. The Contractor shall not cut any temporary opening or take down any portion of a fence until the property owner or tenant has been contacted and arrangements made for a fence opening. All gates, including any installed on Company property, shall be closed when not in use. The Contractor is responsible for and shall ensure that all fences confining livestock are maintained so that the livestock cannot escape.

**4.13.2** The Contractor shall notify the Designated Representative prior to removing an existing fence. If an existing fence must be removed to complete clearing operations, the Contractor shall re-install or replace the existing fence with like material at the same location, regardless of fence condition prior to clearing. When a fence attached to the trees is removed, and the trees are cut not to exceed four (4) inches from the ground's surface, then the contractor shall install pressure treated wood or steel posts and reinstall the fence.

When specified by the Company, the Contractor will install gates in maintained fences crossing the right-of-way. All gate materials will be furnished by the Company, unless

specific project bid unit includes furnishing gate materials. The Contractor will be responsible for all materials issued.

- 4.13.3** When required by the Company during 500 kV clearing operations, the Contractor shall install steel fence posts in existing fences according to Company Specification Drawing T4-D27.2. The Company will furnish the Contractor with 8-foot-long galvanized steel posts with metal clips. For fences crossing the right-of-way, a minimum of two steel posts will be installed approximately 50 feet on each side of the centerline. For fences that generally parallel the right-of-way, steel posts will be installed approximately 100 feet apart. All posts installed will be leveled with existing posts either by driving down or driving down to refusal and cutting. The Contractor will be responsible for each post furnished by the Company.

## **5.0 CLEARING DETAILS**

The following clearing specifications are expected to be performed by the Contractor on each clearing project.

### **5.1 General**

- 5.1.1** No heavy equipment shall be operated off the right-of-way, except in areas specifically addressed in the erosion control plan and clearing plan, unless specifically authorized by the Designated Representative.
- 5.1.2** Matting is required in designated sensitive areas. Commercially constructed wood or fiberglass/composite mats shall be used. Non-bound, non-consolidated timber and brush mats are not acceptable.
- 5.1.3** No stump removal, blading, or other disturbance of the root mat is allowed on or off the right-of-way unless specifically authorized by the Designated Representative.
- 5.1.4** All woody vegetation within the right-of-way limits shall be cut to within four inches of the ground's surface with the exception of low growing vegetation specified to be left intact and undamaged in buffer zones.
- 5.1.5** Existing stump piles and logs from previous clearing or logging operations on the right-of-way shall be disposed of as specified with all other brush and debris.
- 5.1.5** No woody vegetation shall be piled, burned, or buried on Company right of way or on the right of way of any existing communication line, power line, gas line, highway right of way, or any other utility right of way.
- 5.1.6** All cut material shall be entirely removed from ditches, drains, creeks, and streams. Streams will be kept open and free-flowing at all times.
- 5.1.7** Pine brush and logs, including danger trees, shall be felled and piled such that they are not in contact with growing pine trees to help prevent the transfer of pine beetles from cut brush and logs to growing pine timber.
- 5.1.8** The Contractor shall not clear any vegetation on a highway right-of-way, or any ornamental type vegetation including trees, shrubs, fruit trees, etc. without the prior

knowledge and consent of the Designated Representative. Any vegetation removed without consent shall be replaced by the Contractor at the Contractor's sole expense.

- 5.1.9** The Contractor shall cut and dispose of individual trees as directed by the Designated Representative. Individual trees cut in pastures and fields shall be completely removed so that grazing land or crops are not damaged. All foliage from wild cherry trees cut in pastures shall be immediately removed and deposited outside pasture fences.
- 5.1.10** The Contractor shall not clear or otherwise disturb the areas around substations unless specifically allowed or directed by the Designated Representative. If disturbed by the Contractor's operation, the Contractor shall provide and plant the necessary shrubs or trees to re-establish screening or area vegetation suitable to the Company. The Contractor will not be liable for any damages if approved by the Designated Representative.
- 5.1.11** Wetlands shall not be disturbed nor is grading/blading allowed in wetlands. Root mats and low growing vegetation shall be maintained.
- 5.1.12** To ensure stream banks are left intact, stream crossings shall be by temporary bridges only. The Company's standard specification for temporary stream crossings shall be used for all such crossings.
- 5.1.13** At angle points, the Contractor shall clear areas outside of the right-of-way easement for the installation of guys and anchors. PEC will provide stakes or other suitable markings to delineate the area to be cleared.

## **5.2 Sensitive Areas**

- 5.2.1 Buffers** – Environmental regulations, or PEC policy or practices, designate certain riparian areas (lands immediately adjacent to streams or other water bodies) as buffers. Such designated areas will be identified in the clearing plan and will restrict the extent of clearing and/or methods used for clearing. Typically, these areas will be hand cut, and there will be restricted access by heavy equipment. The buffers are typically 20 feet for wetlands, 30ft for non-regulated streams, and 50ft for regulated streams.
- 5.2.2 Wetlands and Streams** –Wetlands and streams are identified in the clearing plan, and require limited access and restrictions on clearing. Specific limitations/requirements will be included in the clearing plan.

Crossing of wetlands with equipment should be avoided, and where necessary, must be conducted using mats, unless specifically authorized otherwise in the clearing plan.

Crossing of streams with equipment should be avoided, but where necessary, must be conducted using temporary bridges. No culverts or fill material can be used unless specifically identified on permit documents.

- 5.2.3 Archeological and cultural resource sites** – Projects affecting or potentially affecting archeological resource sites may have site-specific restrictions. Such sites will be clearly marked, and any restrictions noted on the clearing plan and will be fully discussed in pre-project meetings.
- 5.2.4 Threatened and endangered species** - Projects affecting or potentially affecting threatened or endangered species may have site-specific restrictions. Such sites will be

clearly marked, and any restrictions noted on the clearing plan will be fully discussed in pre-project meetings.

- 5.2.5 All selectively cleared vegetation in sensitive areas shall be removed by equipment working outside those areas, unless authorized by the Designated Representative or as specified in the clearing plan, to ensure that the remaining vegetation is not damaged.

### 5.3 Danger Trees

- 5.3.1 The Contractor will use a teleheight to determine danger trees to be cut. The Company will provide the horizontal distance from the survey line to the outside conductors.
- 5.3.2 The danger trees shall be hand cut to minimize damage to the surrounding vegetation unless designated representative authorizes machine cut. The contractor shall include compensation costs for cutting danger trees in the right-of-way clearing unit.
- 5.3.3 Danger trees shall be disposed of as specified in the Clearing Plan and described in Section 6.2.
- 5.3.4 The danger trees shall be cut to within four inches of the ground surface. The danger trees should be cut all along the entire length of a transmission line even if there is no clearing required in the ROW corridor.

## 6.0 CLEARING AND DISPOSAL METHODS

The clearing and disposal methods that the Contractor uses will be specified in the Clearing Plan or in the Request for Bids. The different types of methods are described below.

### 6.1 Cutting Methods

- 6.1.1 Machine Cutting - Machine cutting equipment will be used in designated non-sensitive areas to remove woody vegetation to within four inches of the natural ground's surface. Removal of stumps is prohibited. Machine cutting is permitted only in upland areas, outside designated sensitive areas and buffer zones of defined wetlands, river, stream, and creek channels. No machine cutting equipment is allowed in these areas. All areas within clearly marked designated sensitive areas shall be hand cut per Section 6.1.2.

The only exception for allowing machine cutting equipment within designated wetland areas or to cross defined stream and creek channels is when no other access to the right of way from upland areas is available. When access to the right of way from upland areas is impeded by designated wetlands or defined river, buffer zones, stream, and creek channels, approved mats or low ground pressure equipment must be used to navigate the wetland areas and temporary portable bridges must be used to cross defined streams and creeks. The temporary bridges and mats are not provided by PEC. If crossing through a wetland area or over a stream or creek is required to access an upland area, prior approval from the Company's Designated Representative or Environmental Support personnel is required.

The Contractor shall at all times minimize any erosion or disturbance of the natural root mat. The ground disturbance in upland areas must be minimized, stabilized/repaired at the discretion of the Company's Designated Representative or Environmental Support personnel. Per Section 4.12, a ground cover sufficient to prevent erosion of any exposed soil shall be provided within 15 calendar days after soil disturbing activities are

completed. The Contractor shall take immediate and additional corrective action to stop sediment from leaving the site. If previously approved and installed erosion control measures are inadequate, the Contractor shall install additional measures as required to prevent soil erosion and off-site sedimentation. After permanent vegetative stabilization of the site, the Contractor shall remove temporary measures and install permanent vegetation on those areas disturbed by removal of erosion control measures.

There shall be no grading, blading, grubbing, or other ground disturbing activity that directly or indirectly results in the disturbance of the root mat. It is the intention of PEC that native root stock will remain undisturbed to promote rapid re-vegetation of the right-of-way with native plants. Machines utilizing a rotary chipper/cutter/grinding head shall not penetrate beneath the soil surface nor depress wood debris into the soil. No payment shall be made for seeding or mulching of areas where root mat was destroyed or damaged by a rotary mulcher/chipper/cutter or other mechanical device. Such areas, if any, shall be corrected by the Contractor or at the Contractors' expense, as directed by the Designated Representative and/or Environmental Support personnel.

- 6.1.2 **Hand Cutting** - Chainsaws or similar hand operated equipment will be used in designated sensitive areas to cut woody vegetation to within four inches of the natural ground surface. Removal of stumps in these areas is prohibited.
- 6.1.3 **Selective Hand Cutting** - Selective hand cutting requires cutting vegetation as described in Section 6.1.2; however, in buffer zone areas, only vegetation exceed a mature height of 12ft shall be cut. All remaining low-growing trees, shrubs, vines, grasses, herbs, etc., shall be left to grow in their natural state. No heavy equipment shall be allowed within the designated selective hand cutting areas except as stated in section 6.1.1. The ground cover, root mat, topsoil, and remaining vegetation shall be preserved at all times.

## 6.2 **Disposal Methods**

- 6.2.1 **General** - All unmulched or unchipped woody vegetation must be completely removed from the cleared right of way corridor including designated sensitive areas and along the banks of rivers, streams, and creeks unless otherwise instructed by the PEC representative. All woody vegetation greater than 3 inches in diameter or longer than 3 feet in length permanently left within the right of way corridor will be considered a violation of contract specifications and will be removed, chipped, or mulched by the Contractor or at the Contractor's expense.

In landscaped areas cut stumps shall be removed by grinding the stump to approximately 3 inches below the natural ground level. If the stumps are located in a grassed area, the chips shall be disposed of in a PEC approved upland area. If the stumps are located in an area already mulched, the chips may be spread evenly around the stump.

Sensitive areas may have specific disposal requirements. Any such requirements will be described in the clearing plan and will be fully discussed in pre-project meetings.

- 6.2.2 **Hauling** - Permanently stacking or piling woody vegetation within or along the edge of the right of way corridor is prohibited. All unmulched or unchipped woody vegetation greater than 3 inches in diameter or 3 feet in length must be removed from the Company's right of way and transported to an acceptable disposal site. The Contractor is responsible for locating an acceptable disposal site, providing the means of transporting, and complying

with the selected site's disposal specifications. The equipment selected for transporting the woody vegetation shall not damage the Company's right of way corridor, buffer zones or other sensitive areas described within this document. No heavy equipment is allowed to remove cut debris in designated wetland areas or along the banks of rivers, streams, and creeks, or in other designated sensitive areas. The cut debris in these areas shall be removed by using a combination of hand removal and/or heavy equipment with mats or low ground pressure equipment. No winching or dragging of trees is allowable, to prevent damage to wetlands and stream banks.

- 6.2.3 Chipping** - Except in designated sensitive areas and including the buffer zones of wetlands, rivers, streams, and creeks, all woody vegetation shall be chipped and spread uniformly on the right of way. No chipping shall be performed in designated sensitive areas or in the buffer zones of wetlands, rivers, streams, or creeks. Chips from the chipping operation are not to be allowed to fall, be blown, deposited, allowed to drift, migrate, or otherwise enter into designated wetlands, rivers, streams, or creeks. Chipping is only allowed in upland areas where wetlands, rivers, streams, and creeks will not be adversely affected. Woody vegetation cleared from designated wetland areas or along the banks of rivers, streams, and creeks may be chipped only when transported to upland areas prior to chipping. Otherwise, the removed woody vegetation must be removed from the right of way corridor.

No woody vegetation shall remain in or across rivers, streams, or creeks. No woody vegetation shall remain immediately adjacent to rivers, streams, or creeks without prior approval of the Designated Representative. If complete removal is not practical, the designated representative must approve plans to allow hand cut woody vegetation to remain within a designated wetland area. In this situation, the cut woody vegetation must have all limbs removed and left oriented parallel to the flow or potential flow of water. Under no circumstances will the remaining woody vegetation be allowed to be stacked or piled within the designated wetland area. Also, if allowed to remain within the designated wetland area, the woody vegetation must be completely removed from the center 20 feet of the right of way or 10 feet each side of the right of way corridor center line to allow for line construction and future maintenance access.