




**Price Electric
Cooperative**

A Touchstone Energy® Cooperative 

RIGHT-OF-WAY CLEARING GUIDELINES, METHODS AND PROCEDURES



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Item 1.0 RIGHT-OF-WAY CLEARING/RECLEARING REQUIREMENTS

1.1 General

Aerial and/or Mowing Maintenance will be required to maintain all right-of-way to Price Electric Cooperative (PEC) specification on both urban/residential and rural right-of-way where a specified or desired right-of-way width has been established, reestablished, or maintained.

All work is to be performed under the supervision of the Contractor. Work shall be conducted in a manner such that all phases of the clearing and/or re-clearing work shall progress concurrently, (*i.e.*, cutting, disposal, and final cleanup). PEC has the sole authority to designate the class of right-of-way (Refer to 1.2 through 1.12). If any recent right-of-way clearing/re-clearing is encountered, and it does not conform to these specifications, it is to be reported to the authorized PEC representative and included in the bid.

For those landowners where PEC has documented easement rights, follow the GUIDELINES, METHODS, AND PROCEDURES handbook as outlined by this document. For those situations where landowners are affected, when PEC has no documented easement rights, and must rely on prescriptive rights, and the authorized PEC representative has concluded clearing/trimming must occur, the Contractor shall contact the landowner and explain PEC's GUIDELINES, METHODS, AND PROCEDURES for line clearing.

If a landowner inquires about a line reroute/conversion, they shall be referred to an authorized PEC representative.

Contractor personnel, during the process of notification, shall wear contractor logo that is visible at all times. Contractor personnel and equipment shall at all times present a professional appearance. Under no condition will a contractor employee be shirtless or wear sleeveless shirts. Each vehicle shall carry provided copies of PEC's "Authorization to perform work" letter to be used with customer contacts. "Contracted by: Price Electric Cooperative" magnetic signs provided by PEC shall be displayed on vehicles and equipment during working hours and removed prior to leaving the job site each night. Contractor is responsible for the loss or theft of all issued PEC materials and equipment.

All trimming on right-of-way boundaries shall be ground to sky. If the crown of a tree or any branches are within the right-of-way boundaries, even though the base of said tree is outside of right-of-way boundary, this tree will be considered as part of the Bid Project and shall be removed or trimmed to meet the guidelines.

All danger tree removal will be performed by PEC unless otherwise directed in writing. Danger trees will be assigned to the contractor as necessary. Payment

will either be by contractor's submitted labor and equipment rate or by an accepted bid for each project as they develop (Refer to Item 5.0).

All tree and brush species within the required right-of-way width shall be cut, leaving a stump three inches or less in height, or flush with the grade whenever possible. Exceptions are to be directed by an authorized PEC representative.

*****Refer to HERBICIDE GUIDELINES, METHODS, AND PROCEDURES Handbook for further information*****

1.1.1 Options for Refusals/Reluctance to Yield Right-of-Way in Approved Urban Locations:

Options to modify right-of-way clearing may be offered to individual landowners or groups of adjacent landowners that object to clearing according to the standards indicated by the PEC right-of-way program. In providing these options, PEC seeks to enable individual members to choose methods for right-of-way clearance that best address their concerns while preventing the burden of costs for use of non-standard procedures from being placed upon PEC members as a whole.

Because of varying site conditions, not all options will be offered in all locations. Options that may be available for a particular site include:

Relocation of lines:

Where consistent with PEC standards for line maintenance/improvement, rerouting of lines or moving lines underground at the member's expense will be considered. Rerouting must follow PEC guidelines, and accessibility to the lines must be as good as or better than at the original location. In locations where groups of landowners must agree to rerouting, it is the responsibility of interested landowners to negotiate agreement with adjacent landowners and obtain necessary easements before rerouting can proceed. If such agreement cannot be obtained within a time frame specified by PEC, right-of-way clearing will proceed unless other options are negotiated individually with PEC.

1.2 Right-of-Way Definitions

PEC's right-of-way widths are 40 feet (both single and multiphase overhead lines), measured perpendicularly from the centerline of the power line outward 20 feet in both directions. Exceptions to the above, as designated by an authorized PEC representative.

Guidelines, Methods & Procedures

PEC's right-of-way widths are 20 feet (both single and multiphase underground lines), measured perpendicularly from the centerline of the power line outward 10 feet in both directions. Exceptions to the above, as designated by an authorized PEC representative.

The following definitions have been established for PEC's right-of-way program:

Wetland Area:

The Department of Trade and Consumer Protection Agency (DATCP) which governs the application of herbicides defines a wetland as an area of standing water present at the time of application and/or by test of the "wet footprint" method described as being the compaction of soil from the weight of an individual after which water visibly migrates into the footprint.

Maintained Yard Area:

Defined as a plot of land where a landowner has dedicated time and incurred expense to landscape, consistently tend to, and mow grass to an even height to establish a yard or yard like area.

PEC reserves the right to make the final determination of the above areas.

Rural: Defined as any primary lines not within a maintained lawn area near approved lakeshore, dwelling, or business including the primary maintained driveway entrance that have been initially cleared to the 40 foot rural specification.

Urban: Defined as any primary lines within¹ a maintained lawn area near approved lakeshore, dwelling, business *excluding* the primary maintained driveway entrance that have been initially cleared to the 10 foot, single phase, or 15 foot, three phase, urban specification.

Single Phase Line:

Rural: 30 feet (15 feet either side of the center line). Ground-to-sky cutting, trimming, mowing, and herbicide application.

Urban: 20 feet (10 feet either side of the center line). Ground-to-sky cutting, trimming, mowing, and herbicide application.

¹ Only if line is the same side of public road as buildings and it is the same property owner. Covers only the area under the line that is the frontage of the maintained yard area. Not meant to include areas other than parallel to a lakeshore, dwelling, or business.

Three Phase or Multiphase Line:

Rural: 40 feet (20 feet either side of the center line). Ground-to-sky cutting, trimming, mowing, and herbicide application.

Urban: 30 feet (15 feet either side of the center line). Ground-to-sky cutting, trimming, mowing, and herbicide application.

Note: All of PEC's right-of-way classifications, urban or rural for either single-phase or multi-phase lines, consists of a total 40 foot wide easement width regardless of vegetation width established in clearing activities.. Right-of-ways identified by contractor as rural but were originally cleared to urban specification should be reported to an authorized PEC representative. These areas will be addressed individually and cleared at the discretion of PEC.

The Contractor shall designate the edges of the desired right-of-way with biodegradable flagging or other acceptable marking, as required, to maintain a uniform width as specified by the contract documents, attachments, or authorized PEC representative.

1.3 Mechanical Clearing and Re-clearing

Clearing and re-clearing work will be permitted by mechanical operations. Where the use of limbing machines is approved by PEC, stubs of not more than 6 inches in length or a branch collar cut will be acceptable on any tree 4 inch in diameter or larger. *Should 1/3 or more of the tree's live crown area need to be reduced or removed to achieve the required clearances, the Contractor shall attempt to remove rather than trim. When the tree's shape and appearance deviate from what is generally normal, the tree shall be considered for removal.* Contractor will be responsible for going back and removing any stubs greater than 6 inches in length. After any mechanical operation, the Contractor shall restore the land to the natural contour existing prior to the start of the work. This must be accomplished to the complete satisfaction of PEC and the landowner.

1.4 Selective Cutting

1.4.1 Selective cutting may be performed in specified areas designated by the authorized PEC representative during the course of the contract period. These are generally areas of high public exposure (*i.e.* streams, and lakes).

1.5 Riparian Management Zone (RMZ)

1.5.1 The term Riparian means relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or tidewater. The RMZ is defined as a strip of land and vegetation next to lakeshore

and stream banks where management practices are modified to protect water quality, fish and other aquatic resources.

Best Management Practice for RMZ's crossing water with slopes greater than 10%:

- ◆ A vegetation screen will be left from the ordinary high-water mark back 10 feet on both sides of the water crossing. The removal of tree species from this 10-foot zone will be by hand cutting method.
- ◆ All woody vegetation back 100-feet from the vegetation screen zone will be removed by hand cutting method.
- ◆ The right-of-way width will be reduced to meet PEC's urban specification 100-feet back from the ordinary high-water mark on either side of the water.
- ◆ Brush will be windrowed on the edge of right-of-way.
- ◆ Logs will be piled along edge of right-of-way per specification 5.2.1 for cross-country rights-of-way.
- ◆ Efforts will be made to provide the least amount of disturbance to low growing grasses and forbs (*i.e.*, fodder, food or an herb other than grasses) to hold soil in place 100-feet from waters edge.
- ◆ Introduce appropriate grasses/forbs into cut over area of rights-of-way on a case-by-case basis as determined by PEC.
- ◆ Install silt fence on a case-by-case basis as determined by PEC.
- ◆ Operation of wheeled or tracked machinery within 100-feet of the ordinary high-water mark is only with prior authorization from PEC.
- ◆ Use selective harvesting to remove tree species only and promote long-lived shrub species appropriate to the site.

1.5.2 Best management practices for water crossing with slopes less than 10% for rights-of-way that parallel a body of water.

- ◆ Where possible, a vegetation screen will be left 10' back from the ordinary high-water mark with the removal of all tree species.
- ◆ The rights-of-way will be reduced to meet PEC's urban specifications in order to achieve the above vegetation screen.
- ◆ Efforts will be taken to provide the least amount of disturbance to the vegetation screen area.

1.6 Primary Lines Rights-of-Way for Urban/Residential and Rural Sites

The Contractor shall meet the required right-of-way width in designated areas by removing and/or trimming trees and other woody vegetation all diameter

breasts height (dbh) classes. The work shall meet the authorized PEC representative's approval. Refer to Urban Diagram #2 and Rural Diagram #1.

Exceptions:

As designated by the authorized PEC representative. Large mature trees and fruit bearing trees (*i.e.*, apple trees) within the urban defined right-of-way may not require removal. The aforementioned, fruit bearing trees or yard trees that remain within the right-of-way shall be trimmed in accordance to the PEC right-of-way clearing specifications per Diagram #3.

1.7 Secondary Lines Rights-of-Way for Urban/Residential and Rural Sites

Secondary circuits are to be cleared only if authorized by PEC's representative.

Secondary circuits include all right-of-way between the PEC owned pole with transformer and the final PEC owned pole.

All limbs and branches within three feet of a secondary conductor shall be removed by natural pruning methods. Trees in which the main stem contacts secondary conductors shall be removed.

Secondary circuits will be assigned as necessary. Method of payment will either be by contractor's submitted labor and equipment rate or by accepted bid for each project as they develop.

1.8 Individual Services

Services are to be cleared only if authorized by PEC's representative. Tree limbs/branches contacting and deflecting individual service shall be trimmed to provide three (3) feet of tree-to-conductor clearance. Services are to be defined as the span from the last PEC secondary pole to customer's meter. Method of payment will either be by contractor's submitted labor and equipment rate or by accepted bid for each project as they develop.

1.9 Overhead Guy Stubs

Clear within a 5-foot radius of a stub guy pole(s).

1.10 Anchors

Clear within a 5-foot radius of an anchor(s).

1.11 Primary Riser Poles with no overhead conductors attached.

Clear within a 10-foot radius around all underground primary riser poles.

1.12 Primary Poles

Clear within a 20-foot radius around all primary poles for a rural right-of-way and a 15-foot radius for an urban right-of-way. Other vegetation (shrubs, etc.) shall be cleared within a 5-foot radius including maintained yard areas.

Item 2.0 NOTIFICATION/AUTHORIZATION

- 2.1 For work performed on Urban ROW's, the Contractor shall provide the property owner(s) with notification of intent to conduct the required right-of-way clearing work for major trimming and removals only. All light trimming considered by the contractor to be routine maintenance will be performed without further notification or delay. Any trees marked for removal by contractor shall be marked with orange paint or bio-degradable ribbon. This contact shall precede any work done on any property by a minimum of five (5) working days. The work will then be scheduled for each crew. Any line clearance work done without proper notification must have specific approval by the authorized PEC representative. PEC must have **30 days** notice requesting notification letters to be sent before any contact takes place.
- 2.2 Verbal notification of the property owner for routine line clearance work is sufficient. If the property owner is not home, a notification card may be left on the door. Notification cards shall not be placed in any U.S. mailboxes. Notification cards shall only be used where the owner is likely to be present on site on a regular basis

Absentee owners may be notified by mail or by phone.
- 2.3 In the case of the industrial, municipal, county, state, or large private estate type of properties, the caretakers or other designated individual in the employ of the owners who is responsible for the trees or brush to be cut or trimmed is considered to represent the interest of the owner. Notification of such caretakers or grounds maintenance supervisors is acceptable.
- 2.4 The contractor shall maintain a written daily log of all member notification and/or refusals by personal contact. The log shall include a record of the date of initial contact, party contacted, address, any agreements entered or understanding reached, and any follow-up conducted.
- 2.5 If contractor is approached by a member any time during the performance of their work refusing the required trimming/clearing activities to/on their property or a specific tree(s), area(s), and or shrub(s), contractor shall honor the request and notify the PEC authorized representative.
- 2.6 If landowner refuses access to PEC Rights of Way, Contractor shall notify authorized PEC representative immediately.

Item 3.0 COMPLAINTS AND ADJUSTMENT OF CLAIMS

- 3.1 Complaints/claims of any nature received from property owners or those in authority over trees or brush removed or trimmed shall receive immediate attention by the Contractor. The Contractor shall immediately inform PEC via the daily log of any property damage complaints, which may arise. The Contractor shall keep PEC informed of the status of each complaint and of any settlement made with the damaged party. All claims shall be settled as soon as possible and to the reasonable satisfaction of PEC and the landowner. Contractor shall inform authorized PEC representative within two weeks of every damage claim that has been settled.
- 3.2 The Contractor will be billed by PEC for any unplanned interruptions to electrical service resulting from the Contractor's actions. (Based on unsafe work practices on individual basis.)
- 3.3 The Contractor assumes entire responsibility and liability and shall adjust all complaints, whether said complaints arise from Municipal, County, State, or Federal authorities or from property owners or owners of the abutting property sustained or alleged to have been sustained in connection with or to have arisen out of the performance of the work.
- 3.4 The Contractor shall, without cost to PEC, re-perform any work that does not comply with the terms of this agreement, including, but not limited to:
 - 3.4.1 Re-trimming if the work is not to the reasonable satisfaction of the authorized PEC representative.
 - 3.4.2 Returning to an area to clean up debris left, or to remove a tree that should have been removed but was not.
 - 3.4.3 Repairing any and all damage to any property caused by Contractor to the reasonable satisfaction of PEC and property owner. Including but not limited to; repair of all ruts, fences, and areas not completed to specification.

Item 4.0 - TRIMMING METHODS AND PROCEDURES

- 4.1 Tree trimming may be required where limbs of trees outside the clearing limits protrude into the right-of-way. Trimming shall be performed as follows:
 - 4.1.1 Trim trees to provide maximum clearance per this document from PEC's facilities, consistent with current easement requirement.
 - 4.1.2 Re-establish or improve the clearance provided from all previous tree maintenance performed.

- 4.1.3 Techniques consistent with the practices of natural, lateral and drop crotch trimming should be utilized. Drop crotch pruning consists of reducing tops, sides, or individual limbs, and avoids cutting back to small suckers. Directional pruning or trimming shall be used to direct or train future tree growth or sprouting away from the wires.
- 4.1.4 Cuts should be made immediately above lateral branches, which are no smaller in diameter than one-third the diameter of the branches being cut. The Shigo² method of making flush cuts to the parent stem, limb, or trunk, without cutting into the branch collar or leaving any protruding stubs shall be used. All trees requiring trimming shall be trimmed at the edge of the clearing limits, unless otherwise agreed to with written consent from the landowner.
- 4.1.5 The practices of “shearing,” “flat-topping,” “pollarding,” and “rounding over” shall not be permitted. Stubs not to exceed six (6”) in length shall only be permitted where use of mechanical equipment having limited clearances is used.
- 4.1.6 Where practical, cuts should primarily be restricted to large diameter branches made well within the crown. Shaping through the use of many cuts of small diameter branches in the outer crown shall be avoided.
- 4.1.7 Branch and topping cuts are to be made outside the branch bark collar leaving as small a stub as possible, in a manner consistent with natural target trimming techniques.
- 4.1.8 Tree trimming required on coniferous trees (red pine, white pine, spruce, larch, etc.), along the established tree edge shall involve the removal and/or trimming of limbs that are encroaching the right of way. Removal of the limbs will be back to the main stem, trunk, and/or to suitable live lateral branch.
- 4.1.9 The pruning work shall preserve, where possible, the natural form of the tree, typical to the species. Balsam Fir, Spruce, Pine, and Northern White Cedar shall be trimmed in a manner that allows them to retain as much of their natural shape as possible.

*NOTE: Should **one-third or more** of the tree’s live crown area need to be reduced or removed to achieve the required clearances, the Contractor shall attempt to remove rather than trim. When the tree’s shape and appearance deviate from what is generally normal, the tree shall be considered for removal.*

² Pruning Trees near Electric/Utility Lines, by Dr. Alex L. Shigo.

- 4.1.10 Large diameter limbs shall be removed with proper sequence and placement of saw cuts to prevent stripping or tearing down of bark from the remaining limb or trunk.
- 4.1.11 All slash (branches, limbs, and tops) which hang up in the tree(s) being pruned or in adjacent trees shall be removed before moving from the work site.
- 4.1.12 Contractor shall perform trimming to PEC's guidelines when diseased trees are encountered.

4.1.12 a. Oak Wilt

Oak trees are most susceptible to overland spread in the Spring of the year from bud swelling until two to three weeks past full leaf development (*April 15 to July 1*). *If an oak is wounded during this time, cover the wound immediately with tree wound paint.* Tree wound paint can actually slow the natural wound closure process; limit the use of wound paint to the situation described above. PSC 113.0511 Emergency pruning or removal of oaks within the April 15 to July 1 time period is permitted to maintain necessary levels of safety, service and reliability. Some situations where emergency tree pruning and removal may be necessary include:

- (a) Storm-related damage to electrical facilities and/or adjacent trees has caused or could cause a power outage.
- (b) Bringing electrical service into a new residence or business.
- (c) Moving electrical facilities to accommodate road, pipeline, or building construction.
- (d) Rebuilding or upgrading distribution facilities.
- (e) Counties where oak wilt has not been confirmed are exempted from these oak tree cutting however PEC will consider following these recommendations for all counties.

4.1.12b. Heterobasidion

Heterobasidion root disease is one of the most destructive diseases affecting conifers in the Northern Hemisphere. In Wisconsin, HRD is most commonly found in pine and spruce plantations. Infection by the wood-decaying Heterobasidion irregular fungus kills living tissues and leads to growth loss and tree mortality. Spores landing on a fresh cut pine or spruce stump will infect that stump and root system and spread via root contact to neighboring trees, killing them as it invades their root systems. This pattern of spread creates pockets of

dead and dying trees that expand outward. Growth reduction of trees leads to economic losses for plantation owners, and mortality of trees, including seedlings and saplings, has long-term implications for future stand composition and management.

The HRD stump treatment guidelines are designed to help make decisions about the use of preventive stump treatments when harvesting a stand. These treatments limit disease introduction by preventing fungal spores from developing on the exposed surfaces of newly cut stumps. Heterobasidion root disease is one of the most destructive diseases affecting conifers in the Northern Hemisphere. In Wisconsin, HRD is most commonly found in pine and spruce plantations. Infection by the wood-decaying Heterobasidion irregular fungus kills living tissues and leads to growth loss and tree mortality. Spores landing on a fresh cut pine or spruce stump will infect that stump and root system and spread via root contact to neighboring trees, killing them as it invades their root systems. This pattern of spread creates pockets of dead and dying trees that expand outward. Growth reduction of trees leads to economic losses for plantation owners, and mortality of trees, including seedlings and saplings, has long-term implications for future stand composition and management.

The HRD stump treatment guidelines are designed to help make decisions about the use of preventive stump treatments when harvesting a stand. These treatments limit disease introduction by preventing fungal spores from developing on the exposed surfaces of newly cut stumps.

Stump treatments are typically recommended between April 1 and November 30 if a stand is within 25 miles of a known HRD infection site and the stand is more than 50% pine and/or spruce. However, there are other factors to consider when deciding whether to use the preventive stump treatments. Certain situations when you may not need to treat stumps, referred to as “Exceptions” and “Modifications” in the guidelines, consider variables such as economic feasibility, landowner risk tolerance, unexpected weather patterns and future desired stand composition. Highlights of the revised stump treatment guidelines include:

- Timing of treatments and general distance recommendations *did not change* from older guidance
- Addition of spruce as a species recommended for stump treatment
- Additional Exceptions and Modifications where treatment may not be necessary

- For private landowners with a higher risk tolerance, a 6-mile radius from known infection sites can be considered when evaluating whether to apply treatments
- Even if a stand is considered at low risk for HRD infection, woodland owners should carefully consider the potential impacts to their stand if preventive treatments are not used and HRD becomes established

Along with the guidelines, a [web-based HRD map viewer](#) has been launched. This interactive map displays confirmed HRD locations and 25-mile and 6-mile radius buffers around HRD locations. The purpose of this map is to help users determine whether a stand is within either the 25 or 6-mile buffers where stump treatments are recommended. You can enter an address or GPS location, turn map layers on and off, and zoom in and out to an area of interest.

Stump treatment should be done to Wisconsin DNR Forestry guidelines and the treatment shall be dyed..

4.2 Follow up Aerial Trimming – Urban areas

This specification applies solely for those portions of the electric rights-of-way that, as defined in this guide and by determination of PEC, are considered urban.

4.2.1 In the performance of trimming trees while under contract for the above described work, the contractor, at a minimum, shall trim any trees to meet the urban specifications and/or to the original cut.

4.2.2 All trimming shall conform to the requirements of this document.

Item 5.0 DANGER TREE REMOVAL METHODS AND PROCEDURES

5.1 General

Contractor must investigate all trees along edge of right-of-way (including the opposite side of the road for lines adjacent to a road) for danger trees. Any danger trees noted shall be marked and reported weekly to PEC on a Danger Tree Removal Summary Sheet. (EXHIBIT A)

5.2 For those landowners where PEC has documented easement rights, follow the guidelines, methods and procedures outlined in this document. For those situations where landowners are affected, when PEC has no documented easement rights, and must rely on prescriptive rights, and the authorized PEC representative has concluded clearing/trimming must occur, the Contractor shall

Guidelines, Methods & Procedures

contact the landowner and explain PEC's guidelines, methods and procedures for line clearing.

- 5.3 PEC follows Wisconsin DNR guidelines for danger tree identification and the DNR recommended book "Evaluating Tree Defects" by Ed Hays, 2nd Edition.

- 5.4 A danger or hazardous tree is defined as a tree having one or more of the following characteristics, which may conflict with the conductors or structures (poles and hardware) if such tree(s) fell in the direction or otherwise endangers the PEC line. No danger or hazardous tree should be cut or removed if it cannot make contact with the conductors or structures when falling.

5.4.1 Dead or dying - all dead or dying trees along, or outside the PEC right-of-way. Removal depends on height of tree and direction of the lean.

5.4.2 Leaning trees - trees that have such a lean toward the right-of-way that they cannot be trimmed without removing the tops and slanting the tree back (Refer to 4.1.9. NOTE). Removal depends on height and species of the tree and direction of the lean.

5.4.3 Cankers and canker-rots - present as a localized area of dead bark and cambium on trees on the bark of trunk around the circumference of the tree and often are visible on the canker face. In some cases, canker-rots are internal and not visible.

5.4.4 Animal and mechanical damage - present in the main trunk and broken branches, and must show visible signs of decay with evidence of wounds.

Refer to Table 1 and Table 2 Hazard Tree defect categories (Exhibit B) provided by Wisconsin and Minnesota Departments of Natural Resources, Lancaster & Associates and by the USDA Forest Service.

5.5 Danger Tree Removals - Rural, Urban, Residential Sites

5.5.1 Contractor shall identify dangerous or hazardous trees and bring to PEC's attention. In addition, removal of dangerous or hazardous yard trees is permitted to establish a right-of-way and required clearances after discussion with the property owner.

5.5.2 Danger tree removal may be performed by PEC unless otherwise directed. Danger tree removals will be assigned to the contractor as necessary.

5.5.3 Contractor shall contact the authorized PEC representative concerning questions on responsibility for diseased tree removals.

Generally, PEC's responsibility is to trim per guidelines and make the tree safe. All trees shall be felled away from the conductors and limbs, so that slash is close to ground. Slash from trees felled onto the right-of-way shall be disposed of according to the requirements in Item 6.0 of these guidelines.

- 5.5.4 Method of payment will either be by contractor's submitted labor and equipment rate or by an accepted bid for each project as they develop.

5.6 Stump/Stubble Height

- 5.6.1 Whenever trees and brush are cut within or outside of the right-of-way, the cut stumps/stubble shall not be more than three (3) inches above ground and flush with the grade whenever possible.

Item 6.0 CLEAN UP AND DISPOSAL PROCEDURES AND METHODS

- 6.1 The Contractor, as the work progresses, shall remove all equipment, wood, branches, brush, and debris from the work site, and the work area shall be left in a neat, presentable condition. The Contractor shall dispose of all such material in accordance with applicable laws, rules, ordinances, and regulations and in accordance with the desire of property owners, occupants or PEC, and at such times and in such a manner as to prevent injury to persons or property.
- 6.2 All trees, brush, slash, and other debris shall be disposed of in accordance with the procedures and methods outlined below.

6.2.1 Rural Sites

Chipping/Grinding/Mechanical Mowing

All cut material (slash) including tops and stem wood less than four inches in diameter shall be chipped and/or mowed. Resulting debris may be blown onto the site with permission from property owners. In situations where the right-of-way is on public land, permission to blow wood chips and/or wood debris on site is required from the adjacent property owner. Resulting debris shall not accumulate to depths greater than 6 inches. Chipping and/or mechanical mowing shall be accomplished in such a manner that no wood material will enter any open water, accumulate in existing tree branches or bury desirable low-growing trees/shrubs.

Piling, Lopping and Scattering of Slash

In areas approved by PEC, piling, lopping, and scattering of slash and brush may be accomplished such that all material shall not

exceed 3 feet in height. The method of disposal shall be limited to the outer one-third area of the right-of-way. In such areas, all logs shall be neatly piled parallel along the edge of the right-of-way opposite the roadside wherever possible. Wind-rowing of small diameter vegetation shall be permitted in or adjacent to wooded areas, with permission of property owner.

Timber

All merchantable timber from trees to be salvaged shall be trimmed flush to the trunk and neatly piled parallel along the edge of the right-of-way, opposite the roadside wherever possible, in tree length or as specified otherwise by the authorized PEC representative.

Log piles shall not exceed 5 feet in height and shall be placed parallel along an outer edge of the right-of-way. At no time will log piles obstruct trails, access roads, the general construction area, or be piled up against standing trees on the edge of the right-of-way.

All slash (branches, limbs, and tops) that hang up in the tree(s) being trimmed or in adjacent trees shall be removed before moving from current work site.

6.2.2 Urban Sites

All cut material/debris (slash) shall be removed from right-of-way crossing sites occupied by urban trees and yard trees. Large limb wood and trunk wood shall be removed and may only be left with consent of property owner. The work site shall be clear of all slash and debris upon completion of work on a daily basis. Dump all wood chips for property owners requesting wood chips and having granted permission for tree maintenance on their properties and without solicitation for financial reimbursement (Also applies to Item 6.2.1).

All slash (branches, limbs, and tops) that hang up in the tree(s) being trimmed or in adjacent trees shall be removed before moving from current work site.

- 6.3 Brush, and/or trees growing immediately adjacent to poles will be cut and removed. Vines do not have to be removed, but must be completely cut at the base of poles and guy wires.

Item 7.0 PERFORMANCES AND SAFETY

- 7.1 The Contractor shall obtain full information from PEC as to the voltage of its circuits before starting the various parts of the work.
- 7.2 The Contractor shall at all times conduct the work in a manner as to safeguard the public from injury to persons or property.
- 7.3 The Contractor shall use all necessary protection for its employees and to guard against interference with the normal operation of the circuits. If, in the judgment of the Contractor's General Foreman/Supervisor, it is hazardous to trim or remove trees with the circuits energized, the authorized PEC representative(s) shall be contacted. If deemed appropriate, the necessary protective or de-energized circuits will be provided by PEC to ensure the safe removal of the affected tree parts.
- 7.4 Should the Contractor knock down or come in contact with PEC's conductors, PEC's main office must be notified immediately. The following telephone number shall be used: 1-800-884-0881.
- 7.5 Contractor shall at all times take all reasonable precautions for the safety of employees on the work and of the public by utilizing safety equipment and methods in accordance with the manufacturer's specifications on the herbicide label. Contractor shall comply with all applicable provisions of Federal, State and local laws specifically including Wisconsin Administrative Code Chapter ATPC 29, relating to the use and application of herbicides. Contractor will furnish copies of any required licenses, certifications or permits to PEC upon request.

Item 8.0 WORK SCHEDULING, TIMING, AND REPORTING

- 8.1 The Contractor shall report to an authorized PEC representative. The following activities are included:
 - 8.1.1 Prior notification of work start-up and when adding or changing crew. Crew locations to be given to the authorized PEC representative.
 - 8.1.2 The Contractor shall contact the authorized PEC representative on a daily basis or as often as needed.
 - 8.1.3 Complete the necessary reporting forms as needed. All reports, logs, timesheets, and paperwork shall be accurate, neat, and complete.
 - 8.1.4 Exaggerated, padded, or incorrect work report entries may result in the dismissal of the crew foreman and/or general foreman/supervisor.

- 8.1.5 The crew foreman and/or supervisor shall maintain an up-to-date log (refer to 2.4) of all property owner notification and/or refusals.

Item 9.0 TIME SHEETS

- 9.1 The Contractor will be required to utilize daily time sheets provided by or approved by PEC. Timesheets shall be accurate, neat, and complete.

Item 10.0 WORK NOTIFICATION, TIMING, AND DOCUMENTS

- 10.1 The scheduling of all firm price bid projects is the Contractor's responsibility, except in cases of critical need, as determined by PEC. PEC may, at its discretion, require that specific sites be completed in order that reliability of service is maintained.
- 10.2 The Contractor shall provide five (5) days notice to PEC as to the date that the work will be starting on each circuit, the number and types of crews, and the crew foreman and supervisor's names and telephone numbers. The Contractor shall also notify the authorized PEC representative when there is a change in crew Foreman or the number of crews.
- 10.3 The Contractor must notify PEC of any work scheduled on Saturday, Sunday, holidays, or hours outside of PEC's normal hours of operations, subject to approval by the authorized PEC representative.
- 10.4 Crew's starting and quitting times shall be determined by the Contractor, subject to approval by the authorized PEC representative.
- 10.5 The Contractor shall make all necessary arrangements for crew starting points and garaging of equipment and shall be responsible for associated costs.
- 10.6 PEC properties will not be made available for the Contractor for crew starting points or for storing/garaging tools or equipment, unless authorized by the PEC representative.
- 10.7 In the event the Contractor plans to deviate from the normal work schedule (*i.e.*, leaving the job or starting location due to inclement weather or other cause), the foreman and/or general foreman or supervisor shall call into the appropriate PEC representative.
- 10.8 The Contractor is responsible to ensure line clearance work is carried out on the proper project. Work performed on the wrong project will result in no payment for all work performed at that location.
- 10.9 The Contractor shall keep PEC informed as to the progress of the work with a logbook.

- 10.10 It is the Contractor's responsibility, prior to submitting bids, to contact all shade tree commissions and governing authorities to determine any special requirements on trimming, notices, permits, etc. No payment will be made for go-backs due to non-compliance with state, county, or municipal shade tree ordinances.

Item 11.0 EMERGENCY WORK

- 11.1 In the event of an emergency declared by PEC, the Contractor shall make the crews, supervision, and equipment performing under this contract available to perform work necessitated by the emergency. All emergency work shall be billed on a labor and equipment basis, for crews and equipment, in accordance with hourly rates.



Danger Tree Removal Summary Sheet

Week Ending: _____

Contractor: _____ Project: _____

Crew Foreman: _____

Diameter Class: 8" – 12" 12" – 16" 16" – 20" 20" – 24" 24" – 28"

[illegible]

Table 1. Hazard tree defect categories and a description of high risks within each category.

DEFECT	DESCRIPTION	HIGH RISK POTENTIAL
Dead Wood 	Dead trees or portions of trees are structurally unsound and their time of failure is unpredictable.	Any dead tree, dead branch, dead top or lodged branch.
Cracks 	A split through the bark, extending into the wood. Wood fibers are not fused. Cracked stems or branches cause the affected area to act as 2 or more separate beams, weakening mechanical support.	<ol style="list-style-type: none"> 1. Crack goes completely through a stem or is > 6' long. 2. Two cracks occur on the same stem segment. 3. The stem has a crack in contact with another defect such as decay, a canker or weak union. 4. A cracked branch
Decay 	Wood that is missing or structurally compromised.	<ol style="list-style-type: none"> 1. Decayed wood or cavity affects ½ or more of the stem's circumference. 2. There is less than 1" of sound wood for every 6" in stem diameter. 3. Any tree infected with a canker-rot fungus.
Weak Union 	Union with ingrown bark between stems; wood fibers are not fused. Weak unions are characterized by an acute angle between stems.	Tight union that is either cracked or decayed or associated with another defect.
Canker 	Localized area of dead bark and cambium; wood behind canker may or may not be decayed. Commonly caused by fungi or mechanical injury.	Canker affects ½ or more than the stem's circumference.
Poor Architecture 	A growth pattern or structural imbalance that causes a weakness.	<ol style="list-style-type: none"> 1. Structural imbalance associated with a weakness (typically decay). 2. Tree with an excessive lean (>45°). 3. Large defective branches. Defect may include sharp bend or twist or inrolled bark.
Root Defects 	Loss of structural support due to root rot, wounding, severing or any other factors that causes root mortality.	<ol style="list-style-type: none"> 1. More than 45% of roots severed or otherwise compromised. 2. Leaning tree with recent root lifting.

Table 2. Defects commonly observed on forest trees native to Wisconsin.

TREE SPECIES**(Average life expectancy, yrs.)****DEFECTS**

Ash (black)	Weak unions Uprooting – black ash is most abundant in moist locations and along low banks of streams where uprooting is more likely to occur.
Ash (green & white)	Weak unions Dead branches in the upper and outer crown.
Aspen (big-toothed and quaking) (60-90)	Extensive decay from canker-rot <i>Phellinus tremulae</i> . Stem breakage due to infection by Hypoxylon and other cankers. Rapid decay ¹ .
Basswood (150-200)	Weak unions from both branch unions and stump sprouts.
Birch (white & yellow) (white – 70-110) (yellow – 150-250)	Extensive decay from canker-rot <i>Inonotus obliquus</i> . Stem breakage due to the presence of Nectria canker. Rapid decay .
Box Elder	Weak unions
Butternut	Branch breakage due to the presence of butternut canker.
Cherry (black) (120-150)	Dead branches throughout crown.
Cottonwood (eastern)	Dead branches throughout crown. Rapid decay .
Elm (American)	Dead tree and branches due to Dutch Elm Disease.
Fir (balsam) (70-100)	Uprooting or lower stem breakage may occur as a result of root rot or decay of the root collar region. Balsam fir frequently has a shallow root system. Rapid decay .
Maple (red & sugar) (red – 80-140) (sugar – 150-250)	Weak unions. Dead branches. Stem breakage due to the presence of Eutypella and Nectria cankers. Cracks.
Maple (silver)	Weak unions. Dead branches throughout crown.
Oak (black & northern pin) (black – 150-200)	Extensive decay from canker-rot <i>Phellinus everhartii</i> . Weak unions. Cracks. Dead branches in lower crown from natural branch mortality and upper crown from several factors causing dieback. Dead trees may be common due to oak wilt and two-lined chestnut borer.
Oak (red)	Dead branches (see black oak). Dead trees (see black oak).
Oak (white)	Extensive decay (see black oak). Dead branches (see black oak).
Pine (jack) (60-100)	Extensive decay from canker-rot <i>Phellinus pini</i> . Rapid decay .
Pine (white) (200-300)	Extensive decay from canker-rot <i>Phellinus pini</i> . Dead branches in lower crown due to natural branch mortality. Dead tops due to presence of white pine blister rust canker.
Spruce (white & black) (white – 100-200) (black – 150 – 200)	Uprooting – particularly true on wet sites; spruces tend to be shallow rooted

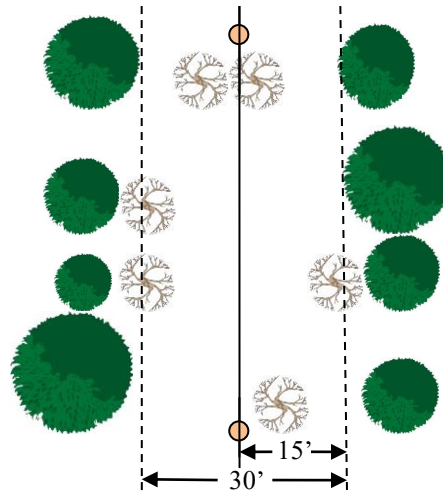
¹ Rapid decay denotes species that are likely to decay quickly if in a state of decline from numerous other initiating factors.



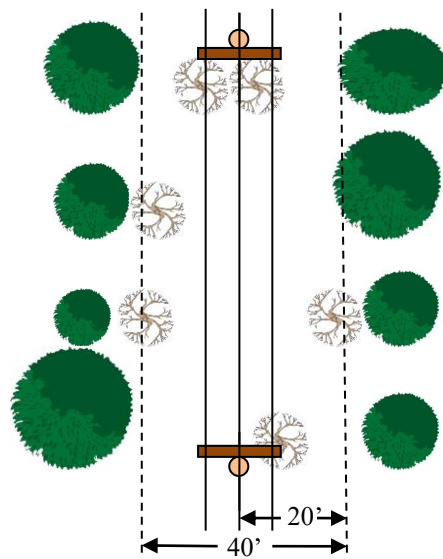
Right-of-Way Clearing Guidelines

Rural Diagram # 1

Aerial View (Single Phase)



Aerial View (Multi Phase)

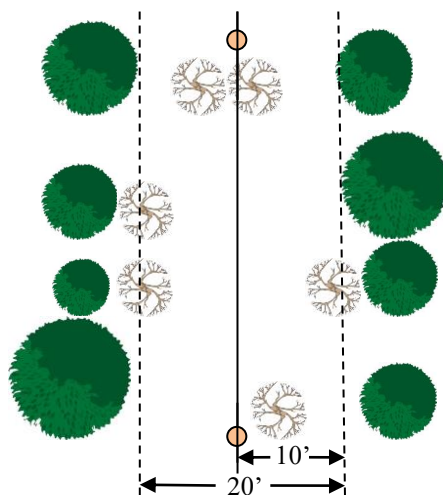




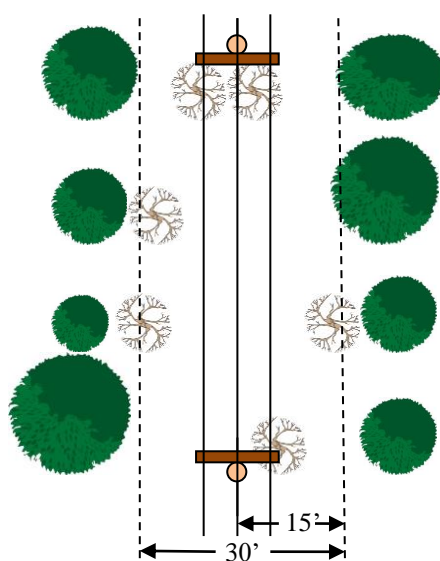
Right-of-Way Clearing Guidelines

Urban Diagram # 2

Aerial View (Single Phase)



Aerial View (Multi Phase)

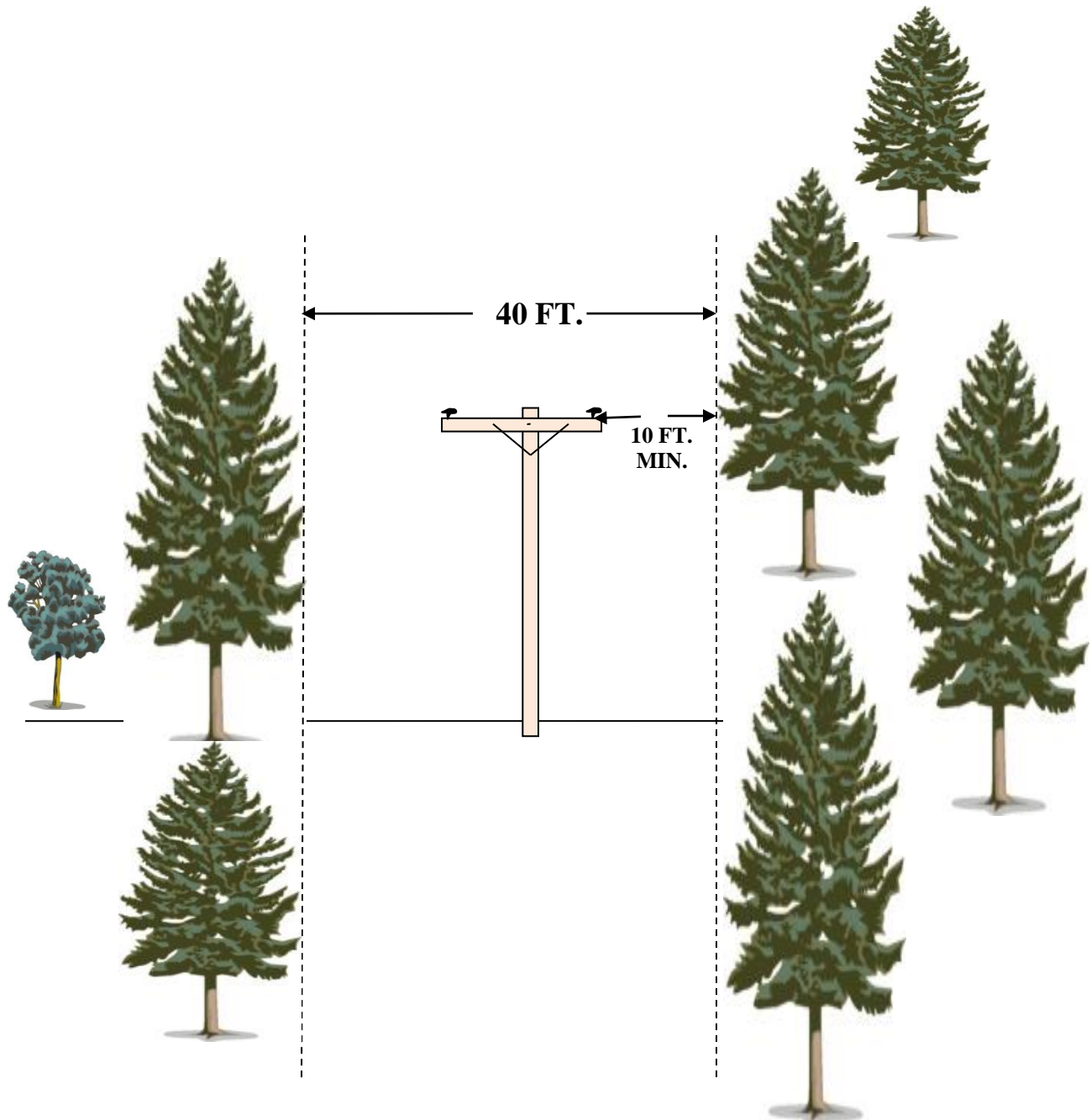




Right-of-Way Clearing Guidelines

Diagram # 3

Elevation View (MultiPhase)





Right-of-Way Clearing Guidelines

Diagram # 4 Right-of-Way Planting Guidelines

All vegetation must be planted away from power lines, so that mature branches cannot grow into the right-of-way. Vegetation that is planted or grows into the right-of-way needs to be cut or trimmed. Vegetation within 20 feet on either side of the power line is at risk for removal due to power line maintenance, repair and replacement. For safe, reliable electric service, follow these guidelines:

YARD PLANTING GUIDE

All vegetation: trees & shrubs
15-FT MINIMUM

RURAL PLANTING GUIDE


All vegetation
20-FT MINIMUM

All vegetation
20-FT MINIMUM

UNDERGROUND PLANTING GUIDE

Because roots interfere with cables and wires, and vegetation impedes access, the required minimum planting distance from all underground power lines is 12 feet.

All vegetation
12-FT MINIMUM

 *Underground cable*

Also, keep areas around electric meters and green transformer boxes clear of vegetation and obstructions that could limit access for repairs.

Call before you dig:
800-242-8511 or 811

DIGGERS HOTLINE