



Highway Maintenance Manual
Chapter 07 Roadside Management
Section 10 Woody Vegetation
Subject 00 Woody Vegetation Management

Bureau of Highway Maintenance
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1.0 Authority

[s. 84.07\(1\)](#), Wis. Stats., Maintenance of state trunk highways. Maintenance activities include the application of protective coatings, the removal and control of snow, the removal, treatment and sanding of ice, interim repair of highway surfaces and adjacent structures, and all other operations, activities and processes required on a regular, continuing basis for the preservation of the highways on the state trunk system, and including the care and protection of trees and other roadside vegetation and suitable planting to prevent soil erosion or to beautify highways pursuant to s. 66.1037, and all routine measures deemed necessary to provide adequate traffic service.

[s. 66.1037](#), Wis. Stats., Beautification and protection.

2.0 General

Trees are a desirable element of roadside vegetation. Mature trees located in the right of way are there to be enjoyed by the motoring public and wildlife. Dead trees provide habitat for many species and should remain undisturbed if located deep into wide roadsides or medians.

1. Woody plants over 4" diameter at maturity shall not be planted or permitted to grow in the highway clear zone.
2. Trees south of the road need to be managed for shadows on the pavement to help reduce winter pavement ice control operations.
3. Where highways cross existing woodlands, the roadsides need selective clearing to soften the forest edges.
4. Dead trees should be removed for highway safety when they obstruct the clear zone or become a hazard should they fall.
5. It is desirable to plant native trees indigenous to the area. Native trees should be designed into the roadside and thus can remain for all to enjoy. Nuisance or trees not native to the area may be removed.
6. Under no circumstances are trees of any age to be harvested just to clear the right of way.
7. Diseased, noxious and dead (if hazardous to traffic) trees should be identified and removed in a timely manner.

This policy is concerned primarily with shrub and tree cutting in the roadside maintenance clear zone. Any cutting done beyond the clear zone shall conform to section 5, Tree and Shrub Removal. There are five basic tools for managing roadside vegetation. The tools are: (1) hand labor, (2) burning, (3) mowing, (4) use of herbicides, and (5) integrated pest management. Each tool has its benefits and drawbacks, depending on the task, vegetation type and desired results.

3.0 Roadside Maintenance Clear Zones

Roadside maintenance clear zones shall provide a barrier-free area to: (a) enhance the sight of drivers, (b) maintain roadside aesthetics and (c) open the roadway to sunlight in the winter.

The clear zone shall be the value shown in each column of Table 1. Except in fill sections (the 2nd column), the clear zone shall be the distance to the toe of the slope, if greater. Each clear zone is measured from the pavement edge, unless otherwise noted. For design classes not represented below, the clear zone for the design class most like the one in question shall be used.

4.0 Clear Zone Tree and Shrub Control

Trimming and pruning of roadside trees shall be done to promote; (a) highway safety, (b) improve roadside appearance, (c) open scenic vistas, (d) provide reasonable vertical clearance and (e) allow the development of other desirable trees.

Promoting highway safety involves: (a) improving vision at curves and intersections, (b) providing adequate

vision in advance of traffic signals and signs and (c) preventing damage caused by breaking limbs.

Trimming for safety reasons shall be done when the need for such trimming is apparent. Trimming done to improve appearance or open vistas shall be done only when patrolmen have the time. Opened vistas shall provide adequate visibility at permissible speeds.

Tree trimming and pruning shall be done according to accepted methods and shall be adequately supervised by the region to ensure neatness and completion.

The region shall provide each county under its jurisdiction with a map or schematic diagram of clear zone widths for each highway on the STH system. Each county shall perform shrub and tree cutting under its routine maintenance agreement as follows.

4.1 Requirements

- All trees over 4" diameter at maturity within the clear zone and vision triangles are removed.
- All trees growing in fence lines, around culverts, near bridges and in other undesirable locations are removed.
- All shrub and tree stubble are treated with an approved stubble or basal herbicide. See HMM 07-10-05, Use of Herbicides, for more information regarding herbicides.
- All regrowth is treated with an approved foliar herbicide. See HMM 07-10-05, Use of Herbicides, for more information regarding herbicides.
- All limbs, debris and firewood are disposed of according to HMM policy 07-10-10 Woody Vegetation Disposal.
- All stumps four inches in diameter or larger are ground down to at least four inches above the ground.
- All shrubs are cut low enough to allow for mowing.
- All shrubs that cause vision problems or invade ditches are removed.

4.2 Restrictions

- Do not cut beyond the clear zone, except trees growing in fence lines, around culverts, near bridges.
- Do not limb-up trees, except to remove dead or broken branches.
- Do not cut mature trees (over eight inches in diameter), trees in dooryards, trees that are memorials, trees that have sentimental value or specimen trees without approval of the maintenance office.
- Do not cut trees or shrub to the clear zone when the back slope is steeper than 2:1. Instead, cut up the slope a short distance.
- Do not cut dead trees beyond the clear zone unless they could fall onto the roadway.
- Do not cut to the clear zone in fill sections where there is a beam guard. Instead, cut 10 to 15 feet beyond the beam guard.
- Do not clear to the construction limits or right of way line if they are beyond the clear zone.
- Do not accept the word of others (foresters, DNR, etc.) and thereafter violate this policy.
- Do not cut mature trees on the right of way.

4.3 Exceptions

- In sensitive areas like Door County, the entire clear zone does not need to be cleared. The policy for such areas should be approved by the regional maintenance office.
- Requests for removal of trees in front of an outdoor advertising signs must follow the [s.84.305, Wis. Stat.](#)
- Requests for removal of trees in front of on-premise signs see HMM 07-35-0, Vegetation Alteration for Site Exposure.
- If more light is needed for winter maintenance, cutting can extend up to 15 feet beyond the clear zone on the south or west side of a roadway.
- The cut edge, the line of vegetation created by the cutting operation should not be perfectly straight. Transitions between clear zones should be gentle and flowing.
- If a diseased tree is outside the clear zone, cannot fall onto the roadway and has a condition like that of trees off the right of way, there is no reason to cut it down.

5.0 Shrub and Tree Removal Outside the Clear Zone

Generally, maintaining the natural vegetation outside the clear zone means only removing vegetation to

reinforce the “Natural Roadsides” concept. “Natural Roadsides” means roadsides contain undisturbed or re-established native plant communities and land forms.

Roadsides should complement or enhance what lies beyond the edge of the right of way, and not compete with Wisconsin’s visual variety. Since the roadside is in the motorist’s field-of-view, it should accentuate the whole viewscape.

5.1 Shrub Removal

1. Growths of shrubs that create traffic hazards detract from roadside appearance or interfere with other maintenance activities shall be cut down by patrolmen as time allows.
2. The following areas shall be kept free of all shrubs and high-growing vegetation.
 - Any point where shrubs would or are restricting vision, such as the roadsides of curves, at intersections or private entrances, or near highway guide signs.
 - In stream channels or culvert discharge ditches where shrub tends to block the free flow of water.
 - Any area on a right of way where shrub causes drifting of existing snow onto the roadway or to a location where drainage may be blocked.
 - Any area within the clear zone where shrub makes mowing difficult.
 - Beneath bridges where shrub can be a potential fire hazard.
 - Any area where selective cutting enhances roadside appearance. Removal may either rid the area of undesirable species of shrub or make sumac, flowering shrubs or other native species more viewable.
3. The stems of shrubs cut for any of the above reasons shall be treated with an approved chemical to prevent re-growth. The chemical shall be applied in such a way as to ensure complete saturation of any stems. See HMM 07-10-05, Use of Herbicides, for more information regarding herbicides.
4. Spraying shrubs without attempting to cut it shall not be permitted by either county or utility personnel unless the proper chemical is used. See HMM 07-10-05, Use of Herbicides, for more information regarding herbicides.

5.2 Tree Removal

1. Dead trees that may fall and affect safety or maintenance operations shall be removed when time and conditions permit.
2. Living trees shall be removed only if one or more of the following conditions exist:
 - The tree is located in the clear zone.
 - The tree obstructs vision because it is located on the inside of a curve, at an intersection, or at a private entrance.
 - The tree is located on the south side of a roadway and causes continuous shade and an icy spot on an otherwise clear roadway.
 - The tree is at or beyond maturity or is of a species likely to fall or splinter onto the roadway during storms.
 - Two or more trees are in close proximity to each other and impeding satisfactory development. In this case, selective removal of the weaker or less desirable trees may be done.
3. Unnecessary and indiscriminate tree removal shall not be permitted. All removal operations shall be planned and conducted with the public in mind. When trees have particular sentimental value, act as memorials or reside in dooryards, their removal may cause controversy. Such tree removal shall require approval by the BHM landscape architects.
4. The stumps of removed trees shall be either completely grubbed out or cut down as close to the ground as possible and treated with a vegetation-control chemical. See HMM 07-10-05, Use of Herbicides, for more information regarding herbicides.
5. Whenever tree removal may jeopardize utility fixtures, the utility company shall be contacted and asked to supply personnel to supervise and ensure safe removal. Cooperation should be encouraged and in some cases insisted upon.

Table 1
Maintenance Clear Zone Widths

Design Class	At Grade or Cut Sections	Fill Sections
No Design Class (22' pavement and less than 6' shoulders)	15'	15'
A1 (22' pavement and 8' shoulders)	25'	30'
A2 (24' pavement and 8' shoulders)	30'	35'
A3 (24' pavement and 6' inside/10' outside shoulders)	35'	45'
A4 & 5 (26-40' pavement. Curb, gutter, and no sidewalk)	8'	8'
A4 & 5 (26-40' pavement. Curb, gutter, and beyond sidewalk)	6'	8'