



Highway Maintenance Manual
Chapter 07 Roadside Management
Section 05 Herbaceous Vegetation
Subject 40 Urban Mowing

Bureau of Highway Maintenance
May 2022

1.0 Authority

[Trans 280, Roadside Vegetation Management](#) Establishes uniform procedures to maintain, enhance and protect roadside vegetation and ecology (maintenance of trees, shrubs, grasses and forbs).

[Section 66.1037\(1\), Wis. Stats.](#) “The authority may improve such lands by suitable planting, to prevent the erosion of the soil, or to beautify the highway. “...it shall be unlawful for any person to injure any tree or shrub, or cut or trim any vegetation other than grass, without the consent of the highway authority and under its direction”.

[FDM 27-1-15](#) is the Department policy chapter providing a listing of federal transportation rules pertinent to roadway vegetation management.

[NR 40, Invasive Species Identification, Classification and Control](#) This is the Wisconsin Department of Natural Resources (DNR) Administrative Code. Regulation includes the movement of invasive plants or their seeds, either intentionally through planting or unintentionally through construction, mowing or other operations. To comply with NR 40, the need to control the movement of invasive plants and their seeds is essential.

2.0 Urban Mowing

This urban mowing policy is used in combination with the natural roadsides philosophy addressed in HMM 07-05-35 and allows for increased mowing frequency in specified urban areas to produce a closer match in vegetation management to adjacent land uses. This urban mowing policy describes the mowing procedures and expectations for mowing of:

1. Urban state trunk highways.
2. Urban controlled-access highway interchanges and access roads.

2.5 Invoicing and Activity Codes

Funding for urban mowing is budgeted for under the following project ID's and activity code for reimbursement purposes:

- Project ID# - 00XX-01-33 Activity Code 045 (Urban Mowing)

3.0 Definitions

[Connecting Highways](#) - Local streets and roads that carry state highway traffic through cities and villages. (They also include some short segments in townships). In these areas, the municipality is provided financial aids and is responsible for providing routine maintenance to state highway standards. Since the municipality is the maintaining authority, they are also the permitting authority under Wisconsin statutes.

[Municipal Extension](#) - The section of state trunk highways located between the corporate boundary and connecting highway limit (construction limit) in cities and villages having connecting highways; or, a state owned route located in an urban area running between the corporate limits and is not bound on either end by a connecting highway limit.

[Municipal Limits](#) - The corporate boundaries of the municipality designated as the city or village found on the current version of County plat map the municipality resides in.

Municipality - A political unit, such as a city or village, incorporated for local self-government.

Controlled-access Highways - Highways, or sections of highways, that have full or partial access control. If a highway has full controlled-access, the property owner has no right of access to that highway. This includes any interstate and freeway interchanges.

Metropolitan Planning Organization (MPO) – A MPO is an area defined for each urbanized area with a population greater than 50,000 for the purpose of providing a forum for local decision-making on transportation issues of a regional nature.

Premier Resort Area - A political subdivision whose governing body enacts an ordinance or adopts a resolution under s. 66.1113(2)(a), Wis. Stats. Wisconsin law permits a municipality or county to impose a “premier resort area” tax if the municipality or county meets certain criteria as described in s. 66.1113, Wis.Stats.

State Trunk Highway (STH) - Highways of the State Trunk Highway System designated by number, which also include the Interstate System and U.S. highways, excluding connecting highways. These highways are the responsibility of WisDOT. WisDOT maintains a list of these highways.

4.0 Urban State Trunk Highways

Urban STH are identified as roadways having all of the following attributes:

- Not a designated connecting highway.
- Right of way within a municipality designated as a municipal extension.
- Roadway defined as curb and gutter sections, medians, and roundabouts.
- Highways with a speed limit of 50 mph or less.

When urban STH has curb and gutter on the median or roundabout portions of the roadway section, the STH urban mowing expectations outlined below can only be applied to the raised median or roundabout portions of these roadway sections, as long as all other attributes are met. When these conditions exist, they typically occur in transitional areas. The outside ditches would then be mowed according to HMM 07-05-35 policy.

Wherever qualified segments are broken up and in close proximity (a quarter mile to each other, for example), they shall be treated as connected and maintained as one unit for continuity purposes.

Roadways meeting all of the criteria above, but have a project maintenance agreement in place with a municipality as identified in Section 6.0, Mowing by Others, in HMM 07-05-35; are being maintained by private individuals; or the municipality has an established mowing ordinance in place shall NOT be included in the urban mowing area.

If there is a section of the roadway defined as an urban STH, but has a mowing area historically not mowed, it shall continue to remain unmowed.

Mowing Start Time, Frequency, and Height

Once vegetation reaches the height of nine inches (9”), mowing operations may begin. Due to the variability of the right of way topography, the minimum vegetation height shall be maintained at a level necessary to prevent the “scalping” of existing turf; consequently, weakening the vigor of individual plants, encouraging erosion, and impacting water quality.

The goal is to have no more than ten (10) mowing cycles during the mowing season, unless there has been prior written department approval. The department understands the unpredictability of the growing season from year to year, but the standard expectation is no more than ten (10) mowing cycles are needed in an average growing season.

More frequent urban mowing procedures will generally remove the flowers from plants before they turn to mature seed limiting the concern for spread of invasive seeds during mowing operations. Invasive species must

be mowed before they go to seed and during periods of low energy reserves, thereby reducing its ability to propagate. This can be accomplished by either mowing more often preventing the seeds from developing or completing the mowing by the dates identified for each county in [Figure 1](#), in HMM 07-05-35. In all situations, if mowing occurs when seeds are present the best management practices (BMPs), as identified in Section 6.2, must be followed to comply with NR 40.

Urban mowing area perimeters shall be set each season at the first mowing cycle and should not be expanded during the season. Mid or late season expansion of mowing areas will cause the distribution of seeds from invasive plants resulting in the violation of NR 40.

Mowing Width Extents

The outside shoulder cut should be the lesser of following options; mow to the right of way or out 30 feet (two passes) from the curb and gutter. In areas of Karner Blue Butterfly or Rusty Patched Bumble follow guidance in section 6.4 and 6.5 Mow all terraced areas not mowed by private individuals or under other municipal agreements, see Section 6.0, Mowing by Others. The terraced areas may be between the roadway and a sidewalk or a shared use path.

All mowing should be accomplished in the direction of traffic.

Mow all turf grass areas inside medians grass islands, and roundabouts.

5.0 Urban Controlled-access Highway Interchanges and Access Roads

Urban controlled-access highway interchanges and access roads are identified as having all of the following attributes:

- Location inside a state defined MPO or within a state defined “Premier Resort Area,” per s. 66.1113, Wis. Stats.
- Part of a controlled-access highway (Interstates, freeways, and freeway/expressway mixes)
- The AADT on two interchange ramps is 5,000 or greater per ramp or the AADT on at least one interchange ramp is equal to or greater than 7,500.

Detailed urban mowing maps identify specifically which controlled-access highways and interchanges and access roads eligible for this application of urban mowing must be maintained.

Mowing Start Time, Frequency and Height

Once vegetation reaches the height of eighteen inches (18”) mowing operations may begin. The vegetation should not be mowed shorter than six inches (6”). Due to the variability of the right of way topography, the minimum vegetation height shall be maintained at a level necessary to prevent potential for “scalping” of existing turf; consequently, weakening the vigor of individual plants, encouraging erosion, and impacting water quality.

The goal is to have no more than six (6) mowing cycles during the mowing season, unless there has been prior written department approval. The department understands the unpredictability of the growing season from year to year, but the standard expectation is no more than six (6) mowing cycles are needed in an average growing season.

Urban mowing area perimeters are set each season at the first mowing cycle and are not expanded during the season. Mid or late season expansion of mowing areas causes the distribution of seeds from invasive plants resulting in the violation of NR 40. In all situations, if mowing occurs when seeds are present the best management practices (BMPs), as identified in Section 6.2, must be followed to comply with NR 40.

Mowing Extents

Interchange mowing shall stop at the exit and entrance ramp terminals. When the maintenance crossover is within 200 feet of the ramp terminal, it will be allowed to mow down to the maintenance crossover. Mowing should be accomplished in the direction of traffic. Figures 1 and 2 provide example interchanges where mowing is allowed within a “diamond” and “cloverleaf” interchange. In areas of Karner Blue Butterfly or Rusty Patched Bumble follow guidance in section 6.4 and 6.5

Outside shoulder – This cut shall be the lesser of the following options: mow to the bottom of the ditch or 30 feet (two passes) from the finished shoulder point away from pavements.

Infields – The infield, as identified in Figures 1 and 2, shall be cut a maximum of 30 feet (two passes) from the finished shoulder point away from the pavement. Woody vegetation outside of the clear zone shall remain and mowing in wet areas is not permitted to prevent rutting and erosion.

Medians – When a median exists, mow from ramp terminal to ramp terminal or maintenance crossover to maintenance crossover to match how the outside shoulder is mowed.

6.0 Other Mowing Guidelines

- In some limited urban areas, vegetation may be cut from right of way line to right of way line. It is not the intent of this policy to mow the entire right of way in urban areas.
- Prior to mowing, remove all litter and hazardous debris, see HMM 07-01-20.
- Mowing equipment should not be run on slopes greater than three to one (3:1) for operator safety and to prevent scalping and rutting of the turf areas, unless the proper equipment can be utilized. Fragile slopes on sandy soils should not be mowed if equipment causes scalping, rutting, or other damage.
- Mowing is not permitted in wet areas to prevent rutting and erosion.
- For delineator posts and sign posts, guardrail, and newly seeded areas, see HMM 07-05-35.

6.1 Mowing for Woody Vegetation

As stretch of roadside that is part of the urban mowing policy, the combination of more frequent mowing to match adjacent land use and proximity to urbanized locations should limit the need for woody vegetation control. Mowing for woody vegetation control should not happen in conjunction with urban mowing. See HMM 07-05-35, Mowing, for guidance on mowing woody vegetation.

6.2 Asphalt or Concrete Medians

Pre- and post-emergent herbicides may be used for maintaining weed growth on asphalt or concrete medians. See HMM 07-05-15 for more about the use of herbicide use.

6.3 Best Management Practices (BMP's)

For guidelines to minimize the inadvertent spread of invasive species, refer to the voluntary and preventative methods contained within the manual [“Invasive Species Best Management Practices for Transportation and Utility Corridors”](#). Generally, it recommends:

- Adhering to species specific mowing time guidelines.
- Not mowing heavily infested invasive species areas when seed is mature or will ripen after being cut.
- Cleaning off mower decks and other seed collection areas on equipment before mowing un-infested areas or moving equipment to other locations.

6.4 Karner Blue Butterfly (KBB)

In areas identified as having KBB, specific timing and frequency of mowing requirements must be adhered to. These requirements and designated areas of KBB are outlined in HMM 07-15-10. More information about the KBB high potential range in Wisconsin can be found on the DNR's [KBB website](#).

6.5 Rusty Patched Bumble Bee (RPBB)

In areas identified as having RPBB, per the Fish and Wildlife Service (FWS) RPBB website, specific timing and frequency of mowing requirements must be met. The current High Potential Zone (HPZ) areas can be found on the [FWS RPBB website](#),

Activities impacted and action required:

Mowing beyond the first 15' must follow these guidelines to comply with the endangered species act.

- Mow outside the active season after October 10th and before March 15th .

Herbicide/pesticide application:

- Follow label directions
- Avoid broadcast application; apply spot applications to target species

7.0 Mowing by Others

For mowing by others, see Section 6.0, Mowing by Others, in HMM 07-05-35.

Figure 1 – “Diamond” Interchange

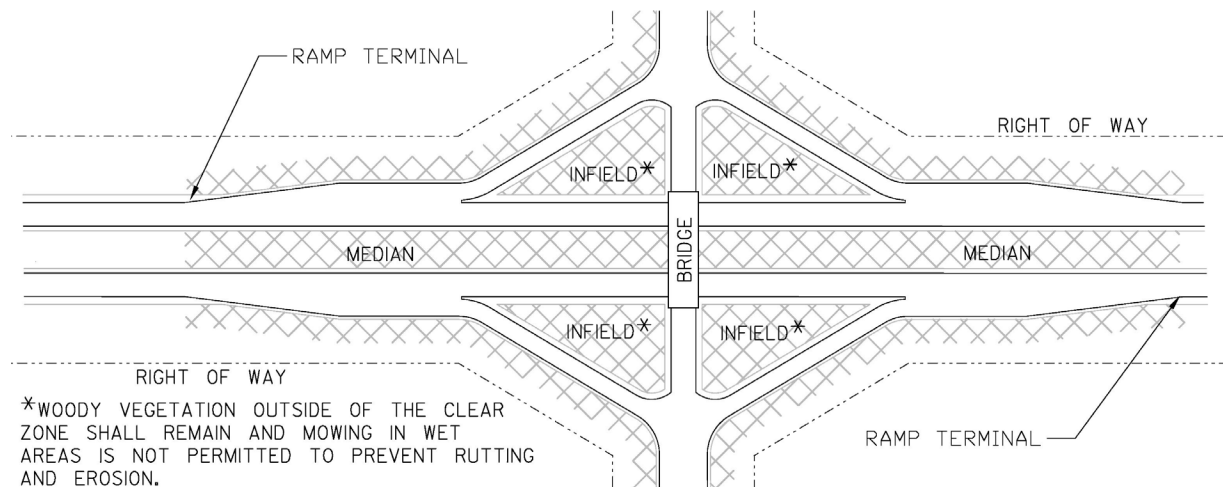


Figure 2 – “Cloverleaf” Interchange

