To:		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 00-036
SUPERSEDED BY EB 21-057 EFFECTIVE 11/24/21			

Title: **Vegetation Control Strips**

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Approved:

Philip J. Clark, Deputy Chief Engineer, Design — Date: 10/18/00

EFFECTIVE DATE. This Engineering Instruction (EI) becomes effective with projects submitted for the letting of 05/03/01.

ADMINISTRATIVE INFORMATION. This EI modifies the guidance currently contained in the Highway Design Manual, Chapter 10, Section 10.2.2.4 and Chapter 3, Section 3.2.7, and will be incorporated into the next revisions of those chapters.

BACKGROUND AND PURPOSE. Vegetation management is an important element to be considered when designing a project as it directly affects the ongoing maintenance of the highway corridor. Vegetation management is needed along roadsides to prevent the growth of 1) vegetation that would reduce safety by obscuring sight distances, 2) trees that would be potentially hazardous fixed objects, and 3) vegetation that would encroach into the shoulder area and effectively reduce the shoulder space available for safe walking and bicycling. A particular maintenance problem is the area close to and under guide rail. Mowing machines are difficult to maneuver in these locations and, even with very careful use, cannot be fully effective at controlling vegetation adjacent to posts. Furthermore, unintended contact can result in damage to both mowers and posts.

Two alternative control measures have typically been used as alternatives to mowing: total vegetation control herbicides or an Optional (hot mix asphalt) Mowing Strip beneath the rail to suppress plant growth. The Department continues to strive to reduce the use of herbicides. The purpose of this EI is to encourage further reductions in the use of total vegetation control herbicides by eliminating the need for ongoing vegetation management under the guide rail. (A selective control herbicide, a bud suppressant, is sometimes used to prevent tree and shrub growth in the clear area that must be maintained behind the rail.) The guidance in the last version of the Highway Design Manual recognized the Optional Mowing Strip as a method of control, but did not place a strong emphasis on selecting that alternative when the opportunity presented itself. This Engineering Instruction changes the status of Optional Mowing Strips from an optional treatment to the preferred method of Vegetation Control when mowing around guide rail and sign posts is not considered practical.

POLICY. It is part of the Department's vegetation management policy to encourage the use of Vegetation Control Strips under guide rail when that use will contribute to reducing the Department's use of herbicides.

DESIGN DETAILS. While other materials continue to be evaluated, the typical Vegetation Control Strips (VCS) shall consist of hot mix asphalt with a minimum thickness of 75 mm.

The width of the VCS will be dependent on the specific site conditions. In the normal shoulder section, the shoulder break is 0.7 m beyond the edge of shoulder and the width of the strip that can reasonably be compacted will be limited to 0.6 m for embankment side slopes of 1:6 or steeper.

Where the presence of a wider, sufficiently level area behind the rail permits placement and compaction of asphalt, the mowing strip should extend to 0.5 m beyond the guide rail and posts.

Rail-type median barriers and flared-back guide rail can normally be accessed from both sides. The aesthetic benefits to managing the vegetation by mowing may be sufficient to warrant that effort. Furthermore, running paved strips diagonally down a slope runs the risk of concentrating sheet flow and inducing erosion. However, if it is determined that vegetation management under a rail is required, but that mowing is not practical, then preference should generally be given to using a VCS rather than resorting to a total control herbicide. Where the guide rail or (rail-type) median barrier is not adjacent to the shoulder and there will be mowed areas between the shoulder and the railing, the width of the VCS should be 1 m, except that a width of 1.5 m should be used for HPBO median barrier. The strip should be positioned to permit equal mowing offsets from either side of the rail system. Where vegetation control strips are needed and the guide rail is not adjacent to, but is less than 1.5 m from the edge of a shoulder, the space between the shoulder and the mowing strip should typically be paved, unless it is judged that a mowed space has sufficient aesthetic or stormwater management value to warrant the effort and risk of mowing.

Where guide rail flares away from the road, the VCS, if required, should follow the line of the rail. This would typically result in an area requiring mowing between the rail and traffic. To minimize the danger to both the mowing crews and the traveling public, the mowing strip should be widened to cover the area between the shoulder and the railing in areas where both 1) the distance between the edge of traveled way and the railing is less than 4.0 m and 2) the traffic volume exceeds 2000 vehicles per day.

MEASUREMENT AND PAYMENT. Measurement will be made on the basis of the number of metric tons satisfactorily placed and compacted. Where the Vegetation Control Strips can be placed as an extension of the shoulder paving operations, the quantity will be included in the shoulder items. Where the Vegetation Control Strips must be placed separate from the shoulder paving operations, payment will be under Item 608.020101 M Asphalt Concrete Sidewalks, Driveways and Bicycle Paths and the corresponding Plant Quality Adjustment Factor (Item 608.020110).

APPLICABILITY. In accordance with the above guidance, Vegetation Control Strips should be used on all projects where guide rail posts are to be driven and mowing near and under that rail is considered impractical.

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