



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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JENNIFER COHAN
SECRETARY

MEMORANDUM

TO: Nicole Majeski, Deputy Secretary of Transportation

VIA: Robert McCleary, Director, Transportation Solutions *RB*

FROM: Mark Luszcz, Chief Traffic Engineer *ML*

DATE: December 15, 2015

SUBJECT: Radar Speed Sign Policy - Update 2015

A Radar Speed Sign dynamically displays the actual speed of vehicles, and is often supplemented with a regulatory speed limit sign. As the digital speed values appear and change as the vehicle's speed changes, they tend to draw the attention of the driver to the sign, where drivers can quickly compare their actual speed to the posted speed limit. These have also been referred to as "Your Speed" signs and driver feedback signs. They are a traffic calming tool, intended to reduce vehicular speeds, particularly on roadways where the speed limit is frequently violated. They are not an automated enforcement tool.

The effectiveness of Radar Speed Signs is questionable at best. In a review of studies conducted across the country, some have shown speed reductions of up to 5 miles per hour. However, the majority of studies have shown negligible speed reductions. In several studies, it was noted that speeds were initially reduced, but then increased over time, often back to original speeds. In studies conducted in Delaware, we have observed changes in average and 85th percentile speeds ranging from a 3 mile per hour reduction to a 2 mile per hour increase.

Given the questionable effectiveness of these devices, high cost compared to a normal sign, and increased maintenance needs; DelDOT has developed the following policy:

- 1) DelDOT will only purchase and/or install Radar Speed Signs if funded through the CTF process, or if funded through other (non-DelDOT) sources. Note that Rule 12 has been

modified to allow CTF money to be used for maintenance of Radar Speed Signs, as necessary.

- 2) Use of Radar Speed Signs on ***municipal roads*** is purely at the discretion of the municipality. Radar Speed Signs may be purchased through the DelDOT CTF process, and provided to the municipality for installation. The town or city is named on the sign vendor's warranty, and must work directly with the vendor on maintenance and warranty issues. For installation in small incorporated towns with little or no staff, DelDOT may assist with the installation of the signs upon request, but maintenance and warranty responsibilities remain with the town.
- 3) Use of Radar Speed Signs on ***private roads dedicated to public use*** is purely at the discretion of the private road owner. Radar Speed Signs may be purchased through the DelDOT CTF process, and provided to the private road owner for installation. The private road owner is named on the sign vendor's warranty, and must work directly with the vendor on maintenance and warranty issues.
- 4) Use of Radar Speed Signs on ***state roads within municipalities*** must be approved by both the municipality and DelDOT. Like most regulatory and warning signs on state roads within municipalities, Radar Speed Signs will be owned and maintained by the municipality once installed. As the Radar Speed Signs will be owned and maintained by the municipality, DelDOT will generally not be opposed to the installation of a sign, but will be involved in the proper placement of the sign, so as to not interfere with more critical signs. Radar Speed Signs may be purchased through the DelDOT CTF process, and either provided to the municipality for installation, or installed by DelDOT forces (at the municipality's request). The town or city is named on the sign vendor's warranty, and must work directly with the vendor on maintenance and warranty issues.
- 5) The primary and most beneficial locations for Radar Speed Signs remain on ***suburban development streets, and other residential streets***, where the speed limit does not exceed 25 mph. It has been demonstrated that these signs are most effective against speeding when placed in such locations, where the peer pressure of fellow residents works hand in hand with the sign to enhance its effect on the driving public. On state owned roads outside of municipalities, through the CTF process, DelDOT will install Radar Speed Signs on these types of roads.
- 6) ***Outside of municipalities, for roadways posted with higher speeds or of a different nature than residential streets***, Radar Speed Signs installed on a permanent basis have demonstrated limited usefulness. People driving the same route every day see the same signs every day and know there are no consequences associated with them. As such, any initial benefits dissipate rapidly. Temporary installations (for construction zones, emergency situations, etc.) have shown greater protracted benefits. As such, the installation of Radar Signs on non-residential roads, with speeds posted above 25 miles per hour, is discouraged. However, if funded through the CTF process, DelDOT will purchase and install these signs upon legislative request.

- 7) *Freeways and major arterials* are not appropriate for the long term placement of Radar Speed Signs. Short term use might be feasible in cases such as during a construction project.
- 8) The term "maintenance," in the case of Radar Speed Signs, consists of tightening connections, adjusting the position of the unit on the post, adjusting the post, re-seating circuit boards, and potentially replacing the battery. Any problems more significant than that require the sign to be returned to the manufacturer. As with most warranties, only defects are covered. As such, vandalism, lightning, crash damage, storm damage, etc. are not covered. Warranties for Radar Speed Signs are typically for two years. If a Radar Speed Sign outside of a municipality becomes inoperable for any reason, DelDOT staff will attempt to repair the device as noted above. If the device cannot be repaired, and the warranty has expired or is voided, DelDOT staff will remove the device and notify the area legislator that funded it. If the legislator would like to pay for repairs by the manufacturer, or install a new device at the same location, new CTF funds would need to be approved.

We understand that Radar Speed Signs are often popular with the public, and in some situations may have a real traffic calming effect. On some roadways, there may be no, or very limited, other traffic calming options to consider. However, as noted previously, the majority of studies around the country and in Delaware have shown the devices have a negligible effect on speeds in the long term. Therefore, we believe the policy outlined in this memorandum provides a fair compromise between DelDOT's goal of using funding and staff resources in efficient ways based on data driven decisions, and the public and/or legislators' desire to implement these devices. In addition, DelDOT staff will continue to keep abreast of national studies of these devices, and will conduct additional studies on their use in Delaware, to help better determine in what situations they might be more or less effective.

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