	TRAFFIC CONTROL DEVICE APPLICATION GUIDELINES OFFICE OF TRAFFIC AND SAFETY		
	Issuing Unit TDS	Application Guideline No. 10-X11	Originally Issued: 02/04/1999

GUIDELINES FOR THE USE OF A SPEED FEEDBACK SIGN (SFS)

BACKGROUND AND PURPOSE

Speed Feedback Sign (SFS), also known as voluntary speed compliance system or radar speed feedback sign, is changeable message sign with integral vehicle-speed measurement unit. The system is used as an educational tool for drivers and is programmed to measure the approaching vehicle speed and provide a message to drivers exceeding a certain speed threshold. It is expected that its use will result in a change in driver behavior at a desired location. Although this system is not intended to be used by law enforcement agencies for speed limit enforcement, its use may result in information suggesting the need for selective enforcement. A SFS is not an automated enforcement tool.

The purpose of these guidelines is to provide guidance for the installation of a SFS. The SFS is considered a traffic control device and as such, it shall comply with the provisions of the Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) including Sections 2A.18, 2B.13, 2L.03 and 2L.04. Any SFS installed on a State highway shall comply with these guidelines, regardless of what agency places and/or owns the unit. It is recommended that SFS installed on roads under the jurisdiction of agencies other than the MDOT SHA also adhere to these guidelines. Sections 25-106 and 25-106.1 of the Maryland Vehicle Law (MVL) require that traffic control devices placed on local streets and highways and along private roadways respectively, must also conform to the "manual and specifications of the State Highway Administration."

SCOPE

These guidelines apply to SFS located within MDOT SHA right-of-way.

EXCEPTIONS

These guidelines do not apply to the use of speed display trailers in work zones.

GUIDELINES

Deployment Considerations

1. A SFS shall not be used on freeways or expressways if pole mounted.
2. A SFS shall be placed in a way that will not detract from the effectiveness of other traffic control devices. The SFS should be placed so that its message will not go unobserved due to a proliferation of signs and other roadside objects.
3. It is recommended that aSFS is not used at a specific site for longer than two weeks. However, if the display is going to be active for longer periods of time, periodic police enforcement should

be arranged to maintain its effectiveness. If the SFS will be used for longer than two weeks, it is also recommended that a before-and-after study is performed for the location.

4. A SFS should be used only in locations with sufficient approach sight distance to avoid startling drivers with its presence and should be used only at locations where it is clear to the driver that the display refers to his/her vehicle exclusively.
5. A SFS may be used wherever there is a need for education of drivers as to the actual speeds being traveled.
6. It is recommended that a SFS are used in concert with concurrent educational and enforcement activities. Consider contacting the Maryland Highway Safety Office (MHSO) and/or State or Local Police forces to coordinate messaging/education/enforcement.
7. A SFS may be used where there is a history of speed-related incidents.
8. A SFS may be used where there is a high relative speed condition caused by a reduction in the posted speed limit (i.e., on a rural road approaching a town).
9. A SFS may be used where an engineer considers such use to be of benefit for alerting the public about speed conditions.

SFS Requirements

All elements of the SFS shall comply with the guidance and standards listed in the latest edition of the MdMUTCD and these guidelines.

1. SFS Display
 - The static portion of the SFS displaying the speed of the approaching drivers shall include the “YOUR SPEED” legend and shall have a black legend on yellow background (see MdMUTCD Section 2B.13). The minimum letter height should be 4” for posted speed limits of less than 45 MPH and 6” for posted speed limits of 45 MPH or higher.
 - The format of the message to be displayed on the changeable message sign (CMS) portion of the sign shall be “XX” in MPH. The color of the changeable message legend shall be a yellow (amber) on a black background. The minimum LED letter height should be 12” for posted speed limits of less than 45 MPH and 18” for posted speed limits of 45 MPH or higher (see MdMUTCD Section 2L.04).
 - The CMS display should be activated only when an approaching vehicle is detected as traveling at 3 MPH or more over the posted speed limit.
 - When the CMS sign is activated, the display format shall not include animation, rapid flashing, dissolving, exploding, scrolling, or other dynamic elements such as emojis (See



MdMUTCD Section 2L.04). Other messages, such as “TOO FAST” are also not permitted to be displayed on the CMS.

- **The following types of speed feedback signs shall not be used in Maryland:**



2. SFS installations

- A SFS can be pole mounted or portable (trailer mounted). The SFS shall be mounted above, below, besides, or within 100 feet downstream of the regulatory speed limit sign (R2-1).
- Sign mounting heights shall comply with Section 2A.18 of the MdMUTCD.
- Sign supports in the clear zone that are not behind a guardrail or barrier must be crashworthy.
- For trailer mounted installations, the trailer shall be placed no closer than 8 feet and no farther than 50 feet from the edge of the traveled way. Trailers should be shielded when possible, should be removed when not needed, and must be delineated when deployed.
- When attachment to MDOT SHA traffic control device structure is considered, refer to the Application Guidelines No. 11-X13 “Provisions regarding the installation and attachment of non-MDOT SHA devices within State Highway right-of-way or to State Highway Traffic Control Device structures”. These guidelines can be obtained from the Office of Traffic and Safety (OOTs) Traffic Development and Support Division (TDSD).
- The installation of a SFS shall not interfere with the visibility and general effectiveness of any other traffic control devices in the area.
- Where practical, the SFS visibility and legibility should be based on MdMUTCD Section 2L.03 and AASHTO “A Policy in Geometric Design of Highways and Streets” Decision Sight Distance Equation 3-4 or Table 3.3 for speed change avoidance maneuver.

$DSD = 1.47 Vt$, where:

DSD = decision sight distance, ft

V= design speed, mph

t= total pre-maneuver and maneuver time, s. (rural road = 10.2 - 11.2 s, suburban road = 12.1 – 12.9 s, urban road or rural town road =14 -14.5 s)

Process to request SFS

1. The use and placement of a SFS on **state highways (not within a municipality)** must be approved by MDOT SHA. To request permission to install a SFS, contact the Assistant District Engineer Traffic (ADE-T) using the District Office Permit application and SFS request form.
 - If the SFS will be used for longer than 30 days, the ADE-T will submit a design request (DR) to the Office of Traffic and Safety (OOTs). The DR must include, at a minimum and if applicable, description of the proposed location, supporting documentation (e.g.,

- speed study, existing TCD in vicinity, power for unit, technical specification), cost and maintenance responsibility, ROW acquisition, and permits.
2. The use and placement of a SFS on **state highways within a municipality** must be approved by both the municipality and MDOT SHA. If the sign has been requested by the municipality, they will be responsible for SFS ownership, installation, maintenance, and removal. To request permission to install a SFS, obtain permission by the municipality and contact the ADE-T using the District Office Permit application and SFS request form.
 - If the SFS will be used for longer than 30 days, the ADE-T will submit a DR to OOTS. The DR must include, at a minimum and if applicable, description of the proposed location, municipality approval letter, supporting documentation (e.g., speed study, existing TCD in vicinity, power for unit, technical specification), cost and maintenance responsibility, ROW acquisition, and permits.
 3. The use and placement of a SFS on a **municipal road** is at the discretion of the municipality who is also responsible for ownership, installation, maintenance, and removal of the sign. However, Section 25-106 of the MVL requires that all traffic control devices placed on streets and highways under the jurisdiction of local authorities conform to the MdmUTCD and MDOT SHA specifications.
 4. The use and placement of a SFS on a **private road** is at the discretion of the road owner who is also responsible for ownership, installation, maintenance, and removal of the sign. However, Sections 25-106.1 of the MVL requires that all traffic control devices placed along private roadways conform to the MdmUTCD and MDOT SHA specifications.

Note: A SFS requested by others and placed on state right-of-way may require a periodic evaluation for compliance by MDOT SHA. MDOT SHA reserves the right to remove any non-compliant devices placed on state right-of-way if they are not in conformance with the MdmUTCD and these guidelines. The owner of the SFS will be responsible for all costs associated with the removal of the sign.

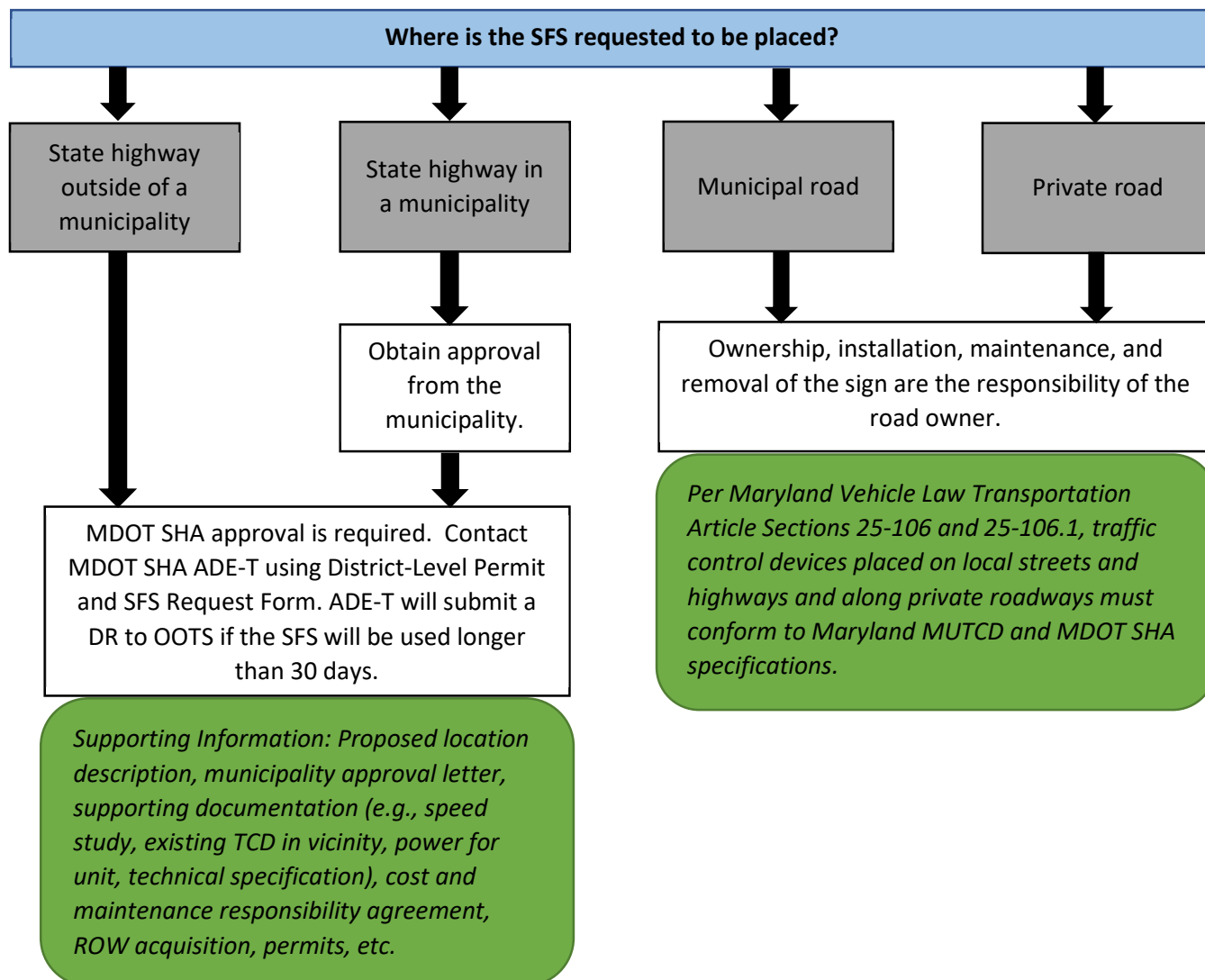


Figure 1. Process to request a SFS



PERMIT APPLICATION FOR SPEED FEEDBACK SIGN ON STATE HIGHWAY

_____	Unit Type Requested:	_____
MDOT SHA District	<input type="checkbox"/> Pole-Mounted	Installation Duration:
	<input type="checkbox"/> Trailer-Mounted	

Location Description (State route number and name; cardinal direction; nearest cross street)

_____	_____	_____	_____
County/Municipality	Applicant/Representative Name	Phone Number	Email

County/Municipality Address

APPLICATION INSTRUCTIONS AND REQUIRED DOCUMENTATION

Include, at a minimum and if applicable the following documentation with your application:

- Description of the proposed location
- Supporting documentation (e.g., speed study, existing TCD in vicinity)
- Specification/Cut Sheet of the proposed SFS

Submit complete application to the District Office.

The applicant understands that all equipment shall conform to federal, state and local standards, specifications, and all other applicable codes and guidelines. MDOT SHA reserves the right to reject SFS units that do not conform to federal, state and local standards, specifications, and all other applicable codes and guidelines.

_____	_____
Signature of Applicant	Date

_____	_____	Approved?
MDOT SHA District Office Reviewer	Date	<input type="checkbox"/> Yes <input type="checkbox"/> No

