Electronic Variable Message Signs (VMS) at Schools

General Location and Operation Fact Sheet

Purpose
The purpose of this factsheet is to provide guidance to schools to ensure road safety around schools is not compromised through driver distraction due to the operation of Variable Message Signs (VMS) by schools to communicate with their local community.

Context / Rationale
The department of Transport and Main Roads does not have the authority over signs in school grounds except under specific circumstances. These guidelines are provided to assist schools in setting general location, operation and message requirements for VMS. It is hoped that these guidelines will be adopted in the interests of maintaining pedestrian and road-user safety in and around schools.

General Location
The location of a VMS sign close to an intersection or pedestrian crossing is of particular concern to the department due to the proximity of LED traffic lights and the many conflict points between vehicles and pedestrians. Motorists distracted at an intersection or school crossing by a VMS is a safety concern.

General location principles for VMS devices include:

- may form part of the school identification signage or be a stand alone device
- must be located within the school property
- should not be placed where visible to motorists travelling in an 80km/h or above speed zone
- should be located and orientated such that light emitted from the device does not cause a hazard for road users or local residents
- the device should be located in accordance with the requirements for a VMS device in the Roadside Advertising Guide*, including but not limited to:
  - must be located away from and not compete with traffic management / control devices for a driver’s attention
  - must not be located at, or near an intersection
  - must not be located at, or near pedestrian crossing facilities.
The location selected should be based on easy viewing and reading by motorists and pedestrians. Ideally the device should be located away from areas that would normally require increased attention or care from drivers.

These devices may be located where visible from school zones under specific extra operating requirements. (Refer to Page 3 for extra operating principles.)


**Operating Principles**

How the VMS are used can also have a significant bearing on the potential for excessive motorist distraction. Schools programming the VMS to flash, scroll and/or display multiple quick messaging can distract motorists for longer periods, than if a single succinct message is displayed without moving. The following principles should be considered when operating VMS devices:

- The VMS device should be limited to a maximum of 4 lines of text, each with provision for a maximum of 18 characters.

- A font height (letter size) should be selected to enable quick and easy reading of the message by both motorists and pedestrians. As a guide the minimum font height shall be 150mm for a device in a 60km/h or less speed zone.

- Its use to be restricted to the display of information specific to the operation of the school and must not be used for other purposes (eg advertising local businesses etc).

- Text only displays are to be used (graphics are not permitted).

- Each complete message is to be contained within the one VMS display screen (a message must not continue over more than one screen).

- The amount of text displayed should be kept to a minimum (for example no more than a driver can read at a short glance). Although a typical VMS may have up to 4 lines of 18 characters, it is NOT necessary to “fill” the screen.

- Each message should be displayed for a period that limits the amount of drivers that will see (potentially be distracted by) a message change while driving past. A minimum display time of 10 minutes is suggested, but the longer a message can be displayed the better.

- Each change of message should be completed instantaneously (within 0.1 of a second).

- Messages must remain static. They are not to move (fading or flying in or out, or scrolling across the screen etc.) or blink (flash) or change brightness.

- Text displayed in a single screen must be the one colour (multiple colours are not permitted). White and yellow are the preferred colours for text on VMS displays. The use of red and green text colours is not desirable especially in close proximity to traffic signals.

- Text displayed in a single screen must be all the same style (font) and size (height).

- In the event of a malfunction, the VMS device must display (default to) a blank screen.
Brightness / Luminance

Luminance characteristics for advertising devices shall accord with the requirements outlined in Appendix D of the Roadside Advertising Guide, except as varied below.

Electronic and digital advertising devices shall have the following maximum average luminance levels:

- Daytime – 2000 cd/m²
- Night – 60 cd/m²

The maximum average luminance listed above is the maximum allowed. The electronic and digital advertising device should contain a light sensor to measure the levels of ambient light in the surrounding environment and adjust the brightness or luminance of the advertising device in accordance with the measured ambient light levels. Signs that do not contain a light sensor must regulate the luminance output based on the time of day.

Extra Operating Principles for Devices Located at School Zones

When the VMS device is located such that it is visible from a school zone the following specific extra operating requirements must apply:

- The message is to remain static (not change) during the following times for an AM and PM school zone - 6:30am to 9:30am and 1:30pm to 4:30pm
- The message is to remain static (not change) during the following times for an ALL DAY school zone
  - 6:30am to 4:30pm.

Extra Operating Principles for EXISTING Devices Located within VMS restriction zones

When an existing VMS device is located within a defined restriction zone (refer the Roadside Advertising Guide) and cannot be relocated (for example due to cost or specific site constraints), the following specific extra operating requirements must apply:

- For safety reasons, the message is to remain static and may only be changed once per day at midnight.

Message Content

Messages displayed on the VMS should be short and succinct. A standard message format suite should be developed by Education Queensland and used by all schools for the majority of messages. Possible examples may include:

- School Term 1 Fete P & C Meeting
  - Commences Saturday 26 March 6pm Wed 19 May
  - Monday 26 January 7am till 3pm In the School Hall

Contact: If you have any queries on these guidelines, please contact the Road System Policy unit, Department of Transport and Main Roads on 3066 3030.