STEEP GRADE 6 % NEXT 2 MILES

US40/EMPIRE   14 MIN
TUNNEL   35 MIN
FRISCO   45 MIN

Variable Message Sign System (VMS)

Variable Message Signs (VMS) are digital road signs used to inform car drivers about specific temporary events and real-time traffic conditions. The signs are often linked to a manned control centre via a local network. Variable message signs (VMS) are a vital part of Intelligent Transportation Systems.

Aim

The aim of using VMS is to provide drivers with mandatory and/or advisory information at the roadside. VMS can be used for many different purposes with the potential benefits of reducing car drivers' stress, travel time and increasing traffic safety. VMS may ask drivers to change travel speed, change lanes, divert to a different route, direct to the available parking space, or simply to be aware of a change in current or future traffic conditions by providing information. The information is intended to assist drivers in selecting appropriate routes avoiding congestion and to reduce drivers' anxiety.

General Benefits

The benefits of the signs in general are difficult to measure. VMS are often used to inform drivers of congestion, incidents ahead and unexpected delays and can as such reduce drivers' stress. Signs can be particularly beneficial where drivers can be informed of alternative routes or park

and ride sites to avoid further delays, but this may require the VMS to be an integral part of a wider and more costly traffic monitoring system. One major study suggests that drivers would like to see VMS used more. Clear facts seem to exist that VMS are not likely to distract drivers if designed properly. A reduction in the number of violations of speed limits can be expected where 'SLOW DOWN' signs are put up.

VMS Components

- **Display technology**
  DMS housing - This style of access to DMS housing will allow the least amount of road disruption regarding maintenance repairs.
- **DMS Controllers**
- **Sign dimming system**
- **Power Requirements**
  - Wiring
  - Circuit Breakers
  - Power Supply
  - Battery Backup
  - Surge Suppression
  - Grounding
- **Communications**
  - Cellular Digital Packet Data
  - Fiber Optic
  - Twisted Pair
  - Spread Spectrum Radio
- **Software**
- **Message Memory**
- **Sign Control**
- **Status Monitoring**
- **Reports**
- **Alarms**
- **Timekeeping**
- **Other Computer Interfaces**
- **DMS Memory Database**
- **Password Protection**
- **User Interface**

VMS Device Features

- Low voltage, constant current driver chip, with high efficient power supplies, ensuring the best energy saving performance.
- Prevent damage from over-voltage, transient surge and lightning.
- Multiple smart design to achieve IP66 for VMS cabinet.
- Patented secondary optical lens design reduce light reflection and offer high brightness output as well as high contrast ratio.
- Built-in photo sensors adjust and offer enough brightness during day and night, free of glare.
- LED failure diagnosis, supporting visual online detection.
- Multiple languages and variable sized fonts available.
- Capable to detect operation temperature and ambient illumination to ensure safe operation.
- Support RS232/RS485, TCP/IP, GPRS and other communication interface.
- Support NTCIP, ModBus, XML, Dianming and other communication protocols.

VMS Benefits

- The mindset and outlook of the speedy drivers- It is the common survey and reports of the highway authorities that the boards that have LED assisted information are quick to adapt to that information and messages as compared to the conventional boards that are put up at one of the corners of the road.
- The ease with which you can install and re-install these boards- A known fact is, these boards are message-fed. That is, one can easily change the information that is being displayed on the boards. The conventional boards are put down, re-painted and then put up again; which is a hectic thing. Thus, the advantage of these boards is- they are easily fed with the necessary information and then put up again. This saves tremendous amounts of time and money that can be saved by using these LED fed boards rather than going for the boards that are painted.
- The maintenance and money issues- These boards are money-friendly. Trust us when we say that these boards require an almost negligible amount of concerns given to it in the long run. A check once in a while is all you would need. The mobile VMS sign boards require less of maintenance and money as well. Obviously, once you install; you won't need to put in money to maintain it thereafter. Everything would be taken care of by the mechanisms themselves; all you would need is to just look after it once in a while.
- Educating people and making a better environment for the highways- These boards are trusted more nowadays because they give the thought of a more civilized environment and society.
- Traffic calming- A haphazard traffic is anytime more uncontrollable than a controlled traffic. Traffic controlling would simply mean controlling speed. And these radar speed sign boards are the best things to trust.
- Travel Time Savings - The chief objective of VMS is to divert traffic flow when an incident happens ahead and by encouraging vehicles to use alternative routes. Therefore, the travel time saving for drivers is one of important benefits of VMS systems.
- Reduction of total delay (vehicle-hours saving) Vehicle-hours reduction per incident is measured to evaluate the benefit of VMS on reduction of total delay. Input and output analysis is used to calculate the total delay of vehicle hours.
- Visual information dissemination
- Advise motorist of potentially hazardous traffic ahead
- Special event information
- Construction information
- Alternate route information
- Reduce Secondary Accidents Reduce Secondary Accidents
- Reduce Travel Delay
- Appropriate/Fast Response to Incidents Incidents
- Proactive Traffic Management