

Congestion and Monitoring Advisory System (CMAS)
Portable, Automated, Real-Time

CMAS is a portable, automated, real-time smart work zone system that monitors vehicular speeds and traffic congestion at different points on a freeway and advises motorists to take specific actions (including taking alternate routes) according to the location, degree of congestion, or incident on the freeway, on/off ramps, or surface streets.

CMAS can be used on any freeway that experiences congestion – with or without work zones. The real-time traffic advisory information can be displayed on portable changeable signs or permanent overhead variable message signs, if necessary.

- Major Components of CMAS:**
- Microwave radar sensors
 - Radios/modems (or cellular routers, if necessary)
 - Software with intelligent traffic algorithm and model
 - Mobile solar-powered trailers
 - Changeable message signs

When traffic is moving at free flow condition:



Each changeable message sign or solar-powered trailer is integrated with a sensor and radio/modem (or cellular routers, if necessary) mounted on it and can act as a single “device” for the purpose of directly communicating with similarly integrated “devices” at upstream or downstream locations and displaying real-time traffic condition information.

When traffic is delayed not more than 10 min:



When traffic is approaching the work zone:



When traffic is delayed 15 minutes or higher:



CMAS:

- ◆ Allows remote control of the system from anywhere
- ◆ Allows manual override of the messages displayed on the signs
- ◆ Provides real-time information on the internet
- ◆ Integrates with cameras and brings live pictures of the highway to the internet
- ◆ Integrates sensors and changeable message signs with intelligent software that calculates the most current delay time or speed at 30-sec intervals
- ◆ Uses 12 VDC power supply from solar power and batteries
- ◆ Archives data with date and time stamp

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