

A protective vehicle occupying any portion of a lane shall be equipped with a flashing arrow panel and a TMA.

- (1) Rear Advance Warning Truck should be positioned no closer than 150 ft. upstream of the work vehicle and should be minimized to deter traffic from driving in between vehicles. SLOW VEHICLES signs should be installed between the Emergency Alert lights or on back of the truck.
- (2) The Light Bar and Emergency Alert lights on the Rear Advanced Warning Truck should be used for striping and sweeping operations and are optional on other mobile operations. If used, the rear facing amber/white light bar is installed on top of the vehicle and the Emergency Alert lights are installed below the flashing arrow panel.

A study on the effectiveness of the Light Bar is currently being completed by the University of Missouri - Columbia. Until the results are known, the Light Bar is optional and no longer required to be purchased for use.

- (3) Shoulder Advance Warning Truck is positioned at the minimum spacing as shown. The spacing may vary due to vertical or horizontal curves that restrict sight distance or locations where the shoulder is restricted (gore areas, guardrail, etc.) and the vehicle must wait to move to another location. If queuing of vehicles occur, the Shoulder Advance Warning Truck should be positioned upstream of the end of the queue.
- (4) The Shoulder Advanced Warning Truck shall be equipped with an appropriate lane closure sign. A mounting height of 48 in. from the bottom of the static sign to the road surface is recommended. A changeable message sign (CMS) may be used instead of a static sign. This protective vehicle may be equipped with a TMA. If FAP is used, the appropriate sequential arrow and/or alternating diamond caution modes should be used.
- (5) For highways where adequate shoulder width is available, the Shoulder Advanced Warning Truck should drive on the shoulder nearest the closed lane or at a location that minimizes traffic merging into the closed lane.

A third protective vehicle (not shown) may be used downstream of the Rear Advanced Warning Truck. The additional protective vehicle should be positioned no closer than 150 ft. upstream of the work vehicle and should be minimized to deter traffic from driving in between vehicles.

For interior lane closures, the Rear Advance Warning Truck and another protective vehicle shall travel in the same lane as the work vehicle. These vehicles shall be no closer than 150 ft and should be minimized to deter traffic from driving in between the vehicles. A double headed arrow shall be displayed on the flashing arrow panels. The Rear Advanced Warning Truck shall be located upstream of the work vehicle and protective vehicle.

For mobile operations on roadways posted at 45 mph or below, the Rear Advance Warning Truck and/or protective vehicles and TMAs are optional provided the work vehicle uses activated rotating lights or strobe lights.

For mobile operations moving at a continuous speed within 15 mph of the posted speed and emergency snow removal operations, the Rear Advance Warning Truck and/or protective vehicles are optional provided the work vehicle uses activated rotating lights or strobe lights.

For mobile operations where workers are on foot and move with the operation, the affected lane shall be closed. Refer to appropriate lane closure typical applications.

Supplemental warning methods may be used to call attention to the work zone.

For pavement marking operations refer to EPG 616.8.35a (TA-35a) through EPG 616.8.35d (TA-35d).

If law enforcement (LE) is used, the LE vehicle may be either be: 1) Upstream 400 - 1000 ft. of the Shoulder Advanced Warning Truck on the shoulder or 2) Downstream at least 400 ft. of the Rear Advanced Warning Truck in the closed lanes.

For additional guidance on Truck/Trailer Mounted Attenuators (TMA) see EPG 612 Impact Attenuators.