

616.8.35 (TA-35) Mobile Operation on Divided or Multi-Lane Undivided Highways - MT

Notes:

A protective vehicle occupying any portion of a lane shall be equipped with a flashing arrow panel and a Truck/Trailer Mounted Attenuator (TMA).

- (A) Protective Vehicle/TMA #1 shall be equipped with a flashing arrow panel, SLOW VEHICLES or a LANE CLOSURE sign, and a Truck/Trailer Mounted Attenuator (TMA).

The Light Bar may be used and the Emergency Alert lights should be used on the Protective Vehicle/TMA #1 for striping and sweeping operations and both 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.

- (B) If used, Protective Vehicle/TMA #2 should be positioned no closer than 150 ft. upstream of the Protective Vehicle/TMA #1 and should be minimized to deter traffic from driving in between vehicles. The spacing may vary due to vertical or horizontal curves that restrict sight distance. Protective Vehicle/TMA #2 may straddle the edge line depending on the road conditions as needed. Protective Vehicle/TMA #2 shall be equipped with a flashing arrow panel, SLOW VEHICLES or LANE CLOSURE sign, and a Truck/Trailer Mounted Attenuator (TMA). SLOW VEHICLES or LANE CLOSURE signs should be installed between the Emergency Alert lights or on back of the truck.

The Light Bar may be used and the Emergency Alert lights should be used on the Protective Vehicle/TMA #2 for striping and sweeping operations and both 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.

- (C) Protective Vehicle/TMA #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.
- (D) The Protective Vehicle/TMA #3 (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. Protective Vehicle/TMA #3 may straddle the edge line if 10-foot driving surface is open. If the Protective Vehicle/TMA #3 occupies any portion of a lane, it shall be equipped with a flashing arrow panel and a Truck/Trailer Mounted Attenuator (TMA).
- (E) For DIVIDED roadways where work is being completed in the LEFT MOST LANE without a shoulder, a Protective Vehicle/TMA #3 (Shoulder Advanced Warning Truck) may be used on the right shoulder and located a minimum 1-mile upstream of the next protective vehicle.

If additional Protective Vehicles/TMAs are used, they shall be placed in between Protective Vehicle/TMA #1 and Protective Vehicle/TMA #3.

For mobile operations on roadways posted at 45 mph or below, all Protective Vehicles/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 or emergency snow removal operations, all Protective Vehicles/TMAs are optional provided the work vehicle uses activated rotating lights or strobe lights.

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

For activities such as litter cleanup, pothole patching, utility operations, or other activities based on short duration guidelines, this Typical Application (TA-35) may be used. If the activity cannot be completed within the short duration guidelines (within 30 minutes), the affected lane shall be closed. Refer to the appropriate lane closure typical applications.

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

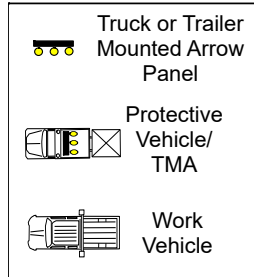
For pavement marking operations refer to EPG 616.8.35a (TA-35a) through EPG 616.8.35d (TA-35d).

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.

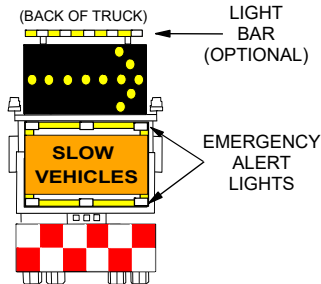
For additional guidance on Truck/Trailer Mounted Attenuators (TMA) see EPG 612 Impact Attenuators.

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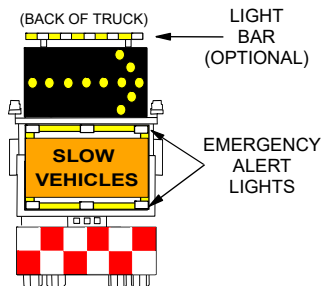
SPEED	SPACING LENGTH (ft.)	
	Shoulder (T1)	Spacing (T2)
Regulatory (mph)		
0-35	-	245
40-45	-	540
50-55	-	660
60-70	-	840



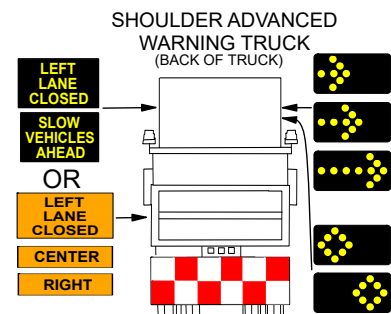
PROTECTIVE VEHICLE/TMA #1



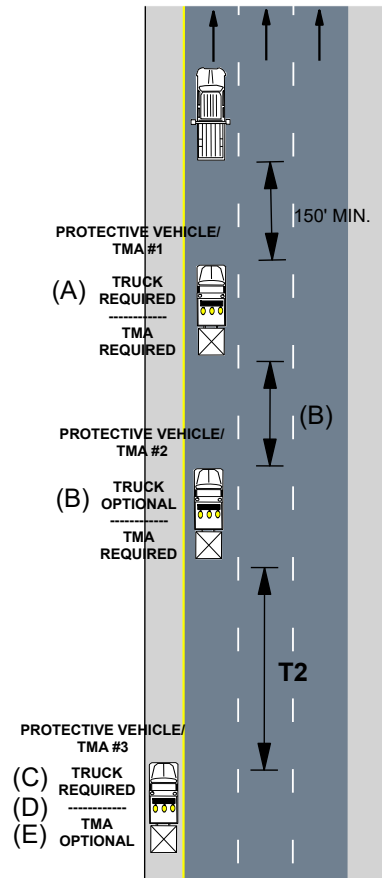
PROTECTIVE VEHICLE/TMA #2



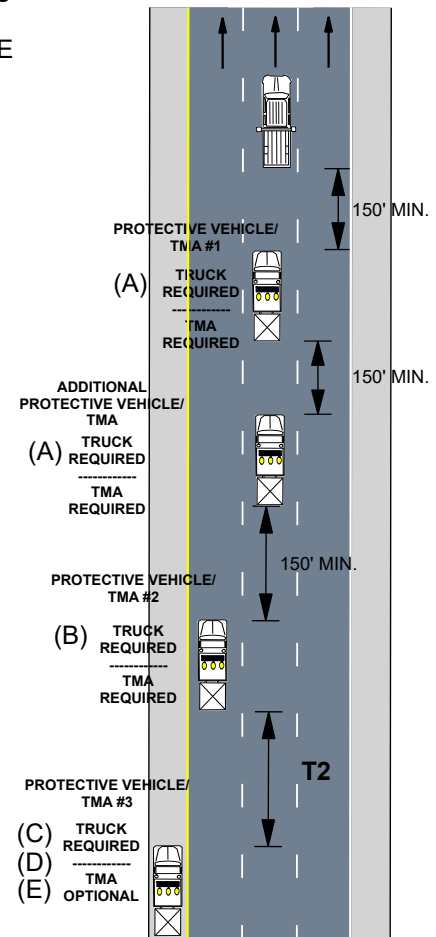
PROTECTIVE VEHICLE/TMA #3



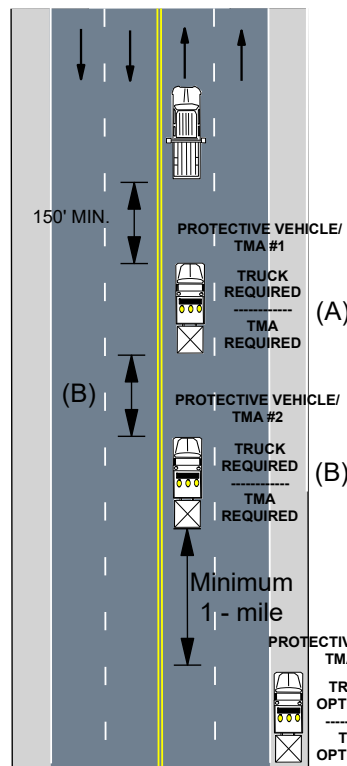
DIVIDED: LEFT or RIGHT MOST LANE



DIVIDED: MIDDLE LANES



MULTI-LANE UNDIVIDED LEFT



MULTI-LANE UNDIVIDED RIGHT

