



NOTES:

1. P = Traffic Pacing Length
For "P" value, see Traffic Pacing Length table or calculate using Formulas.
2. See the Plans for traffic pacing restrictions.
3. Do not exceed work duration of 30 minutes or traffic pacing length of 10 miles.
4. Coordinate with the traffic control officer supervisor to provide the correct number of traffic control officers for each traffic pacing operation. Ensure traffic control officers are located at roadway access points in accordance with the pacing plan.
5. Ensure that the necessary equipment is properly positioned for the work before requesting that the traffic control officer supervisor initiate the traffic pacing operation.
6. If workers or equipment are within the traveled way during the traffic pacing operation, use a truck- or trailer-mounted attenuator with portable changeable message sign to protect the work.
7. For work durations of less than five minutes (e.g. moving large vehicles across the roadway), portable changeable message signs and truck-mounted attenuators are not required. Use traffic pacing length values from the five minute column of the table.
8. Where feasible, do not pace traffic past the last available existing egress until the work has been completed.
9. When more than one traffic pacing operation is required in a calendar day, allow sufficient time between pacing operations to permit traffic to return to normal speed and flow.
10. Maintain communications with all police vehicles throughout the traffic pacing.
11. Place SWZ Location Device on the Traffic Control Officer's vehicle.

SWZ VEHICLE DETECTOR SYSTEM LOGIC

Message	Condition
"SLOW TRAFFIC AHEAD"	> 20 MPH
"STOPPED TRAFFIC AHEAD"	≤ 20 MPH

TYPICAL PCMS DISPLAY:

During day of pacing operation:
 Message 1: ROAD WORK TONIGHT
 Message 2: EXPECT PERIODIC DELAYS

During pacing operation:
 Message 1: SLOW TRAFFIC AHEAD
 Message 2: SLOW TRAFFIC ## MILES

or

Message 1: STOPPED TRAFFIC AHEAD
 Message 2: PREPARE TO STOP ## MILES

One week prior to pacing operation (Optional):
 Message 1: EXPECT DELAYS ON
 Message 2: (Month Day Time)

SYMBOLS:

- Work Area
- Traffic Control Officer
- Lane Identification and Direction of Traffic
- (6) SWZ Portable Changeable Message Sign (PCMS)
- (2) SWZ Vehicle Detector
- (2) SWZ Location Device

TRAFFIC PACING LENGTH "P"

Work Zone Speed (mph)	Work Duration (minutes)					
	5	10	15	20	25	30
70	2.3	4.7	7.0	9.3	-	-
65	2.4	4.8	7.2	9.6	-	-
60	2.5	5.0	7.5	10.0	-	-
55	2.6	5.2	7.9	-	-	-
50	2.8	5.6	8.3	-	-	-

NOTES: (1) All lengths in the above table are in miles.
 (2) For work durations with no values shown above, calculate length using a reduced pacing speed, but not less than 10 mph.

FORMULAS:

S_w = Work Zone Speed (mph)
 S_p = Pacing Speed (mph)
 t_w = Work Duration (minutes)
 P = Traffic Pacing Length (miles)

$$P = \frac{t_w}{60} S_p \left(\frac{S_p}{S_w - S_p} + 1 \right)$$

$$P = P_c + P_w$$

P_c = distance paced vehicles must travel before the vehicles at regulatory speed have cleared the work zone

$$P_c = \left(\frac{t_w}{60} \times S_p^2 \right) \left(\frac{1}{S_w - S_p} \right)$$

P_w = distance paced vehicles travel while work is performed

$$P_w = \left(\frac{t_w}{60} \times S_p \right)$$

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