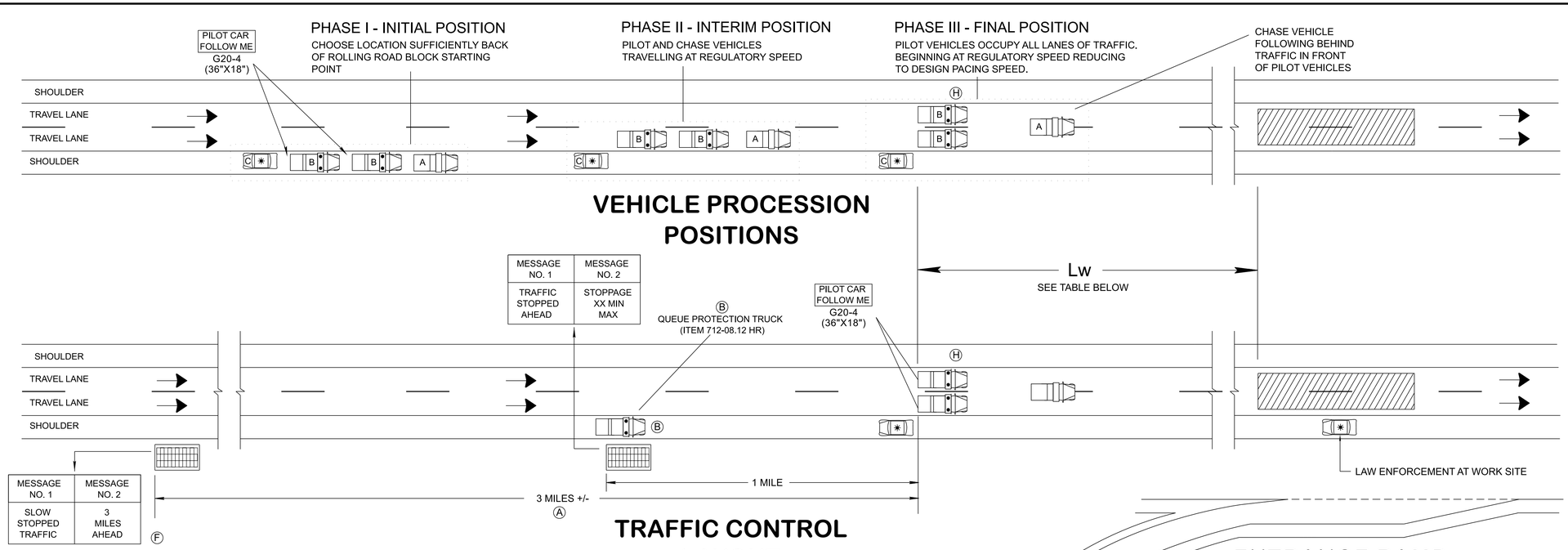

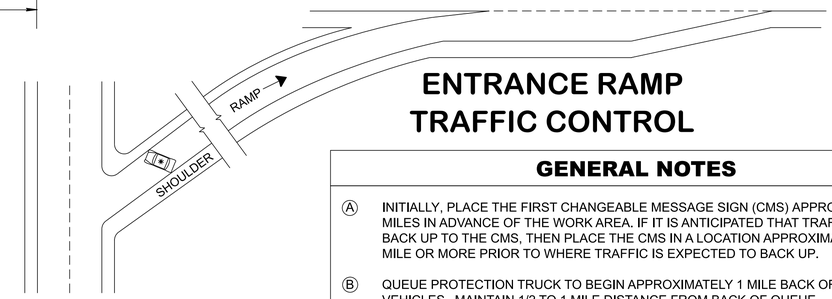

REV. 05-15-2022: CHANGED GENERAL NOTE Ⓔ

REV. 03-26-25: UPDATED TO CONFORM TO MUTCD 11TH EDITION.

NOTES FOR TABLE:

WORK DURATION (Tw) IS THE TOTAL TIME ALLOWED FOR WORK ACTIVITY IN MINUTES. THIS TIME STARTS JUST AFTER THE LAST VEHICLE TRAVELING AT THE PRE-PACING REGULATORY SPEED CLEARS THE WORK AREA AND ENDS JUST AS THE PACING OPERATION REACHES THE WORK AREA. Tw MUST INCLUDE THE TIME REQUIRED TO CLEAR THE ROADWAY OF EQUIPMENT, MATERIALS, AND PERSONNEL.

HOURLY TRAFFIC REQUIREMENTS SHALL BE BASED ON ESTIMATED REAL TIME CONDITIONS AND NOT EXTRAPOLATED FROM AADT. DATA MAY BE REQUIRED TO ACCURATELY CALCULATE HOURLY DIRECTIONAL TRAFFIC VOLUMES. HOURLY TRAFFIC VOLUMES MAY BE CONVERTED TO pcphpl USING THE FOLLOWING:

PASSENGER CARS PER HOUR PER LANE (pcphpl) = (HOURLY DIRECTIONAL VOLUME/ # LANES EACH DIRECTION) * HEAVY VEHICLE FACTOR

Sr = REGULATORY SPEED (MPH)
Sp = PACING SPEED (MPH)
Tw = WORK DURATION (MIN)
L = TOTAL PACING DISTANCE IN MILES

L = (Tw/60) * Sp ((Sp / (Sr-Sp)) +1)
L = Lc + Lw

Lc = DISTANCE PACED VEHICLES MUST TRAVEL BEFORE THE VEHICLES AT REGULATORY SPEED HAVE CLEARED THE WORK ZONE

Lc = (((tw/60)*Sp^2) / (Sr-Sp))

Lw = DISTANCE PACED VEHICLES TRAVEL WHILE WORK IS PERFORMED

Lw = ((Tw/60)*Sp)

Fhv = HEAVY VEHICLE FACTOR

Fhv = 1 + ((Pt/100)*0.5)

Pt = % TRUCKS

TOTAL TRAFFIC PACING DISTANCES Lw (MILES)

Sp = 20; pcphpl <= 1,750

Sr \ Tw	5 min	10 min	15 min	20 min	25 min	30 min
70 mph	2.3	4.7	7.0	9.3	*	*
65 mph	2.4	4.8	7.2	9.6	*	*
60 mph	2.5	5.0	7.5	10.0	*	*
55 mph	2.6	5.2	7.9	*	*	*
50 mph	2.8	5.6	8.3	*	*	*

* DISTANCE NOT RECOMMENDED DUE TO EXCESSIVE WORK TIMES AND TRAFFIC QUEUES POSSIBLE. APPROVAL OF WORK ZONE DESIGN DEVIATION IS REQUIRED

Sp = 15; pcphpl <= 1,440

Sr \ Tw	5 min	10 min	15 min	20 min	25 min	30 min
70	1.6	3.2	4.8	6.4	*	*
65	1.6	3.3	4.9	6.5	*	*
60	1.7	3.3	5.0	6.7	*	*
55	1.7	3.4	5.2	6.9	*	*
50	1.8	3.6	5.4	7.1	*	*

* DISTANCE NOT RECOMMENDED DUE TO EXCESSIVE WORK TIMES AND TRAFFIC QUEUES POSSIBLE. APPROVAL OF WORK ZONE DESIGN DEVIATION IS REQUIRED

SPECIAL NOTES

IF THE MINIMUM DESIGN REQUIREMENTS OF THIS STANDARD DRAWING CANNOT BE MET, A WORK ZONE DESIGN DEVIATION MUST BE SUBMITTED TO AND APPROVED BY THE STATE WORK ZONE ENGINEER.

CHANNELIZATION DEVICE LEGEND

- DIRECTION OF TRAFFIC
- WORK SPACE
- CHASE VEHICLE (A)
- PILOT VEHICLE (B)
- LAW ENFORCEMENT (ITEM N0 712-08.01 HR)
- CHANGEABLE MESSAGE SIGN (ITEM NO 713-16.01 EA)

GENERAL NOTES

Ⓐ INITIALLY, PLACE THE FIRST CHANGEABLE MESSAGE SIGN (CMS) APPROXIMATELY 3 MILES IN ADVANCE OF THE WORK AREA. IF IT IS ANTICIPATED THAT TRAFFIC WILL BACK UP TO THE CMS, THEN PLACE THE CMS IN A LOCATION APPROXIMATELY 1/2 MILE OR MORE PRIOR TO WHERE TRAFFIC IS EXPECTED TO BACK UP.

Ⓑ QUEUE PROTECTION TRUCK TO BEGIN APPROXIMATELY 1 MILE BACK OF PILOT VEHICLES. MAINTAIN 1/2 TO 1 MILE DISTANCE FROM BACK OF QUEUE.

Ⓒ START ROLLING ROAD BLOCK BY HAVING ALL VEHICLES LEAVE THE OUTSIDE SHOULDER AND ACCELERATE TO NORMAL ROADWAY SPEEDS. WHEN NORMAL ROADWAY SPEEDS ARE ATTAINED, THE PILOT VEHICLES (B) WILL POSITION THEMSELVES SIDE BY SIDE AND THEN DECELERATE TO THE SPECIFIED ROLLING ROAD BLOCK SPEED. THE CHASE VEHICLE(S) (A) WILL CONTINUE TO TRAVEL AT NORMAL ROADWAY SPEEDS BEHIND ANY VEHICLES IN FRONT OF THE ROLLING ROAD BLOCK. CLOSE ON-RAMPS/ LOOPS OR STOP TRAFFIC ON SAME BETWEEN PILOT VEHICLES (B) AND THE WORK AREA. LAW ENFORCEMENT MAY BE USED AS A SUBSTITUTE FOR ANY VEHICLE(S). CONSTRUCTION SHALL NOT COMMENCE IN ANY LOCATION WITHIN THE WORK AREA UNTIL THE CHASE VEHICLE(S) (A) HAS CLEARED THAT LOCATION

Ⓓ COMMUNICATION SHALL BE REQUIRED BETWEEN PILOT VEHICLE, CHASE CAR, AND WORK CREW.

Ⓔ LAW ENFORCEMENT OFFICERS (LEO) SHALL BE PART OF ALL ROLLING ROAD BLOCK PROCESSIONS AND AT THE WORK SITE AS ENFORCEMENT DURING ROLLING ROAD BLOCKS. AFFECTED ENTRANCE RAMPS SHALL BE CLOSED BY USE OF LEOs OR AS DIRECTED BY ENGINEER. ALL LEOs SHALL MEET TDOT STANDARD SPECIFICATION 712.04.

Ⓕ CMS SHALL BE IN POSITION APPROXIMATELY 3 DAYS AHEAD OF WORK. MESSAGE SHALL DISPLAY PROPOSED DATE AND TIME OF ROLLING ROAD BLOCKS. MESSAGE WILL BE CHANGED JUST PRIOR TO WORK OCCURRING.

Ⓖ ROLLING ROAD BLOCK TIME OF PERFORMANCE SHOULD BE CAREFULLY CONSIDERED TO HAVE A MINIMAL IMPACT ON TRAFFIC. NIGHT TIME AND OTHER OFF-PEAK HOURS SHOULD BE SELECTED.

Ⓗ PILOT VEHICLES ARE REQUIRED TO OCCUPY EACH LANE OF THROUGH TRAFFIC FOR THE DURATION OF ROLLING ROAD BLOCK. VEHICLES MUST BE EQUIPPED WITH FLASHING LIGHTS AND "PILOT CAR FOLLOW ME" SIGN (G20-4).

Ⓘ COST FOR PLANNING, SETUP AND EXECUTION OF ROLLING ROAD BLOCKS TO BE PAID FOR UNDER 712-01 TRAFFIC CONTROL (LS) EXCEPT FOR QUEUE PROTECTION TRUCKS, LAW ENFORCEMENT, AND ADDITIONAL PORTABLE MESSAGE BOARDS IF NEEDED.

Ⓙ ROLLING ROAD BLOCKS SHALL BE COORDINATED AND APPROVED THROUGH REGIONAL TRAFFIC ENGINEER OR TDOT REGIONAL DIRECTOR.

FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

ROLLING ROADBLOCK DETAIL FOR DIVIDED HIGHWAYS

12-8-2020 | T-WZ-61

NOT TO SCALE

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