WORK ZONES - SHORT-TERM STATIONARY

A short-term stationary work zone is defined by the 11th edition of the Manual on Uniform Traffic Control Devices (MUTCD) as "daytime work that occupies a location for more than 1 hour within a single daylight period". Typical tasks that last from one hour to one daytime work shift include: roadway paving, repairing ruptured underground water lines, repairing stormwater catch basins, trimming roadside trees, and parking work vehicle(s) on the shoulder of the road for extended periods.

This bulletin will discuss the minimum traffic control planning and devices needed to safely guide motorists, bicyclists, and pedestrians around workers and work vehicles during daylight hours. Night operations require additional planning and devices that will not be discussed in this bulletin.

Planning for effective temporary traffic control (TTC) begins with understanding the characteristics of the road being worked on. Factors include:

- Posted speed limit and the speed that can realistically be expected.
- Traffic volume and volume variations during the day; such as morning and afternoon commutes, school hours, and possible lunch or shopping traffic.
- Topography of the road; curves, hills, sun glare or shadows, street width, and shoulder characteristics are a few factors that can impact the effectiveness of TTC plans.

Using the local knowledge of the road and anticipated conditions, planners of TTC will develop a plan in accordance with the MUTCD for the 4 areas of a work zone:

- The Advance Warning Area is the section where motorists are informed they are approaching an area where work will impact the normal paths of travel. This is accomplished using typically one to three signs, possibly in conjunction with amber warning lights or arrow boards.
- The Transition Area contains devices that move traffic from the lane(s) in which work is being conducted into open lanes for traffic. For Short-term Stationary Work Zones, this would normally include a line of cones, called a Taper.
- The Activity Area includes space needed for the work to be completed, parking and moving space for work vehicles, staging areas for supplies and other materials, buffer spaces, and open lanes for traffic.
- The Termination Area is optional and should be utilized when motorists would benefit from a visual cue that they have passed the Activity Area and the original lane is now available.

A flagging operation may also be necessary for One-Lane, Two-Way Traffic operations. Flaggers are needed when motorists can not safely determine on their own whether it is appropriate to proceed past workers in the shared lane. Conditions that would typically require flagging include work zones that are longer in length, on curves or hills, on roads with high volume of traffic or higher speed limits, and near intersections.

It is important to remember only uniformed law enforcement officers can direct traffic against a traffic control signal, such as a traffic light. Public works or utility workers can only flag to direct traffic in conjunction with traffic control signals.

This bulletin provides a summary of the considerations and requirements for setting up a proper and effective temporary traffic control work zone. While New Jersey does not require certification for individuals who plan and set up TTC, they must be trained and knowledgeable.

The complete MUTCD should be available, either in hard copy or electronically. The official version of the MUTCD is available at the FHWA MUTCD Website. Part 6 - Temporary Traffic Control is the relevant section for working on a roadway. The MUTCD should be consulted before establishing a work zone. The 2009 edition has been adopted as the regulation for setting up work zones on all public roadways.

The MEL Safety Institute (MSI) offers a 4-hour class, **Flagger and Work Zone Safety**, which uses lectures, worksheets, and a quiz to demonstrate training. It is offered around the State throughout the year at the MSI Safety Expos. **Work Zone: Temporary Traffic Controls**, **Work Zone Training for Police Officers**, and **Flagger Skills and Safety** are also offered via Zoom on MSI LIVE. Visit the MSI LIVE Schedule to register for upcoming classes.

Rutgers University's Center for Advanced Infrastructure and Transportation offers several classes for temporary work zones and engineering issues.

Summary for Planning a Short-term Stationary Work Zone

- Review characteristics of the road where work will be conducted; including speed limit, traffic volume, curves and hills, and other visual obstructions.
- Determine how much of the roadway must be closed to traffic for workspace, vehicle parking space, staging areas, and buffer zones. Calculate how many traffic cones will be needed by dividing the length of the area (in feet) by twice the speed limit. Load cones.
- Determine the proper taper(s) to close and re-open lanes in which work will be conducted. Calculate the lengths of the taper(s) using Tables 6C-3 and 6C-4 in the MUTCD. Calculate the number of traffic cones needed by dividing the lengths of the taper(s) (in feet) by the speed limit. Load cones.
- Determine the number and messages of advance warning signs. Determine sign spacing with Table 6C-1.
- Will an "End Work Zone" sign be needed?
- Will an Arrow Board be needed?
- Will a flagging operation be needed or is the Work Zone configured to permit traffic to self-regulate? If flagging will occur, load one or two STOP / SLOW paddles.
- Review the plan with workers who will be involved with the work being planned. Remind them to wear the proper level of ANSI high-visibility apparel and other personal protective equipment for the type of work being performed.
- Drive through the work zone before and during the work to verify TTC is effective.