




FACTUAL REPORT OF INVESTIGATION
FACTUAL REPORT ATTACHMENT

ATTACHMENT: MD Work Zone Speed Limit Reduction Guidance

Woodlawn, MD

HWY23FH010

(5 pages)

	TRAFFIC CONTROL DEVICE APPLICATION GUIDELINES OFFICE OF TRAFFIC AND SAFETY			
	Issuing Unit TDSO	Application Guideline No. 6-F1	Originally Issued: 05/14/1995	Revision Date: 11/07/2022

GUIDELINES ON REDUCED WORK ZONE SPEED LIMITS ON MARYLAND STATE HIGHWAYS

BACKGROUND AND PURPOSE

Speed limits in work zones should be carefully established as they affect the safety of motorists and workers and the credibility of speed limits in general. Motorists reduce their speed through a work zone only when there is a perceived need to do so. Arbitrary speed limit reductions may result in non-compliance with the reduced speed limit and a false sense of security for workers.

Large speed limit reductions, especially those that drivers perceive to be unreasonably low (e.g. 30 mph reductions), have been shown to increase speed variance and the potential for crashes. Conservative drivers tend to observe the work zone speed limit, while aggressive drivers continue to operate at speeds closer to or above the posted speed limit prior to the work zone. Smaller reductions in the speed limit of up to 10 mph yield smaller changes in speed variance and lessen the potential for increased crashes. There may be situations where the nature of the work or restrictive features in the work zone require a greater speed reduction. The Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) provides the option to consider a 15 mph reduction on highways with posted speeds of 70 mph.

These guidelines provide direction on the establishment of reduced speed limits in work zones on State highways and supersede former Maryland Department of Transportation State Highway Administration (MDOT SHA) guidelines, dated October 16, 2002 and May 4, 1995, regarding the establishment of speed limits in work zones on 65 and 60 mph roadways.

SCOPE

These guidelines apply to work zones on MDOT SHA owned and maintained roads.

EXCEPTIONS

N/A

GUIDELINES

The safest traffic conditions in a work zone generally occur when traffic is able to pass through the work site under normal operating conditions. Temporary traffic control through work zones should be designed to accommodate normal operating speeds to the extent practicable. There are circumstances, however, where it may be necessary to reduce the posted speed limit through the work zone. Reduced speed limits should only be used where it is imperative for drivers to reduce speeds in order to safely navigate through lane restrictions or other potential obstacles encountered in the work zone.

Conditions that may factor into the need for a reduced work zone speed limit include:

1. A full width shoulder that will be converted to a travel lane
2. Lane widths that will be reduced
3. Long-term stationary lane closures on urban freeways/expressways are proposed

4. The presence of major work activities immediately adjacent to the travel lanes
5. Work zone conditions that dictate a speed limit reduction for safe navigation, for example:
 - Work zone alignments (e.g., long-term median cross-over or traffic shift) that will have a design speed less than that of the existing roadway
 - Adverse roadway geometry (below current design standards)
 - Sight distance restrictions due to grade or alignment changes
6. The work zone eliminates usable shoulders
7. The crash rate for the roadway (prior to construction) is higher than the statewide average for similar roadways

When evaluating the need for a reduced work zone speed limit, other factors to consider include:

- The length of the work zone (or section of the work zone) where the speed limit reduction is being considered;
- The duration of work;
- The type of work; and,
- The type of temporary traffic control devices to be used and their effectiveness.

Process

Where it is necessary to reduce speed limits to improve safety in work zones, the reduced speed limit should be based on adequate engineering study/judgment and shall be approved by the District Engineer (DE). A proposed speed limit reduction in a work zone with Automated Speed Enforcement (ASE) must be approved by the Director of the Office of Traffic and Safety (OOTs) in addition to the DE.

An engineering study shall be conducted to determine the need for a reduced work zone speed limit. This study should include and document the following:

- Traffic conditions during construction
- A determination of the conditions that necessitate the reduced speed limit
- A recommendation of the appropriate speed limit based on traffic conditions
- A statement of the limits of the work zone where the temporary speed limit reduction is to be enforced
- A statement of the times during construction when the temporary speed limit reduction is to be enforced (e.g., throughout all phases of construction, during phase 2 of construction only, etc.)


A memorandum summarizing the results of this study and recommending a reduced work zone speed limit shall be prepared. This memo will serve as the Memorandum of Action (MOA) to temporarily modify the posted speed limit on that roadway. The memo shall be signed by the DE. For projects with ASE, the memo shall be signed by both the DE and the Director of OOTS.

Speed limit reductions should be implemented in 5 mph increments. The maximum allowable speed limit reduction on MDOT SHA roadways is 10 mph. A reduction of 15 mph may be considered for MDOT SHA roadways with posted speed limit of 70 mph in special circumstances.

Work zones with reduced speed limits shall be clearly marked with all appropriate speed reduction and work zone warning signs. The speed limit signing shall include the “Work Area / Fines Double” message as required by the MdMUTCD.

General Guidance

1. Work zone traffic controls should be designed to ensure adequate safety and mobility through work zones and to provide site conditions consistent with the prevailing operating speeds and driver expectations.
2. To the extent feasible, the travel lanes through a work zone should be designed for the design speed of the existing roadway.
3. If a speed limit reduction is deemed necessary, consider whether advisory speed limit signs are appropriate or whether reducing the regulatory speed limit through the work zone is necessary.
 - Advisory Speeds:
 - Use advisory speeds for spot situations such as sharp alignment changes or short sections of narrow lanes.
 - Advisory speed signing shall not be used with general warning signs (e.g. W20-1) or to govern long sections of the work zone.
 - Reduced Speed Limits:
 - Reduced work zone speed limits should only be posted when and where the work zone environment continuously dictates the need for a reduced speed. If work is not underway and/or the site conditions do not require a reduced speed limit, reduced speed limit signs shall be folded, covered, turned or removed. Reduced work zone speed limit signs shall only be displayed at those times it is needed and shall be removed when no longer needed (e.g., if construction Phase 1 requires a reduced work zone speed limit, but Phase 2 does not, the reduced work zone speed limit signs should be removed at the end of Phase 1.)
4. Consider the need for police presence, police enforcement or ASE. Active enforcement of the work zone speed limit or police presence where active enforcement is not feasible encourages compliance with the work zone speed limit.
5. All traffic control devices are to be placed and maintained in accordance with MDOT SHA standards and specifications and in accordance with the MdMUTCD.
6. Work zone speed limit signs shall be placed in accordance with MDOT SHA guidelines and standards (see MD 104.01-06 and MD 104.01-07 for additional information).

Revision Date	Revision Description:
11/07/2022	Updated guidelines to cover speed limits of 70 MPH. Previous guidelines were established when the maximum speed limit was 65 mph.
Approved	 Director, Office of Traffic and Safety
<div style="display: flex; justify-content: space-between;"> 12/16/2022 Date </div>	