



Traffic Guidelines Manual

ORIGINATOR State Traffic Engineer	13-5-6
CHAPTER 13	Traffic Regulations
SECTION 5	Speed Limits
SUBJECT 6	Temporary Traffic Control Zones

A. Background

Speed limit reduction for temporary traffic control zones is discussed in Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD). Excerpts from [Section 6C.01](#) of the MUTCD state:

“Reduced speed limits *should* be used only in the specific portion of the temporary traffic control zone where conditions or restrictive features are present.”

“A temporary traffic control plan *should* be designed so that vehicles can travel through the temporary traffic control zone with a speed limit reduction of no more than 10 mph.”

“Reduced speed zoning (lowering the regulatory speed limit) *should* be avoided as much as practical because drivers will reduce their speeds only if they clearly perceive a need to do so.”

“Research has demonstrated that large reductions in the speed limit increase speed variance and the potential for crashes. Smaller reductions in the speed limit of up to 10 mph cause smaller changes in speed variance and lessen the potential for increased crashes. A reduction in the regulatory speed limit of only up to 10 mph from the normal speed limit has been shown to be more effective.”

The MUTCD guidance corresponds with conclusions of research titled, “Work Zone Speed Limit Procedure,” documented in Transportation Research Record Volume 1657 and National Cooperative Highway Research Program Digest 192. Conclusions of the report include:

1. Motorists reduce their speed in temporary traffic control zones even with no speed limit reduction.
2. Where temporary traffic control zone speed limits are posted, motorists reduce their speed but not to the posted limit.
3. If a reduced speed limit is posted, compliance and crash prevention benefit are best if the speed limit is reduced no more than 10 mph.

4. There is commonly more variance in speed in temporary traffic control zones than in non-zones.
5. Where all work activity is on or beyond the shoulder, there are no benefits from reducing speed limits.
6. Interviews with motorists show that they resent arbitrary, inappropriate speed limits.
7. If a reduced speed limit is posted, the reduced limit must be removed where no activity is present.

To be consistent with the MUTCD and documented research, reductions in speed limits for temporary traffic control zones *should* be evaluated according to the criteria in this procedure.

There is often less need for reduced speed limits in temporary traffic control zones on rural conventional highways. The main reason is that on rural conventional highways, drivers do not have the same expectation for free-flowing traffic as they do on rural freeways. With driveway access and crossing movements on conventional highways, drivers tend to be alert to such movements and other similar conflicts even without reduced speed limits.

Changes in alignment such as crossovers and transitions, or work activities that occupy a short work area, *should not* be posted with short sections of regulatory speed limit signs. If a lower operating speed is necessary, warning signs with advisory speed plaques are more appropriate.

B. Authority

Authority to approve and establish temporary traffic control zone speed limits has been delegated to the Regional Transportation Director and/or designee, typically the Regional Traffic Engineer/Supervisor. This conditional delegation effectively retained State Traffic Engineer approval authority for 65-mph and 70-mph highways.

C. Policy Criteria

Engineering judgment must be used when determining appropriate speed zones. This procedure is intended to assist with the development of an appropriate work zone speed limit. Contact the region work zone engineer or the Bureau of Traffic Operations for assistance with applying this policy.

The majority of drivers operate their vehicles at a speed they deem appropriate for conditions. A posted speed that is close to what most drivers consider appropriate is more likely to yield uniform speeds. Consistent speeds improve safety for the travelling public and highway construction workers.

Speed zones provide drivers an indication of what is considered a reasonable speed for that section of roadway. Proximity to construction activities, drop offs, lane closures, narrow lanes/shoulders and pavement condition all influence the driver's determination of a reasonable speed. The type of construction work, project length, area type (i.e. urban vs. rural), facility type, occurrence of night work and traffic mix (e.g. commuter, recreational, truck percentages) all impact driver expectations and the determination of what is a

reasonable speed. The policy criteria described below *should* only be used for freeways and expressways during intermediate-term and long-term work activities as defined in Part 6 of the MUTCD.

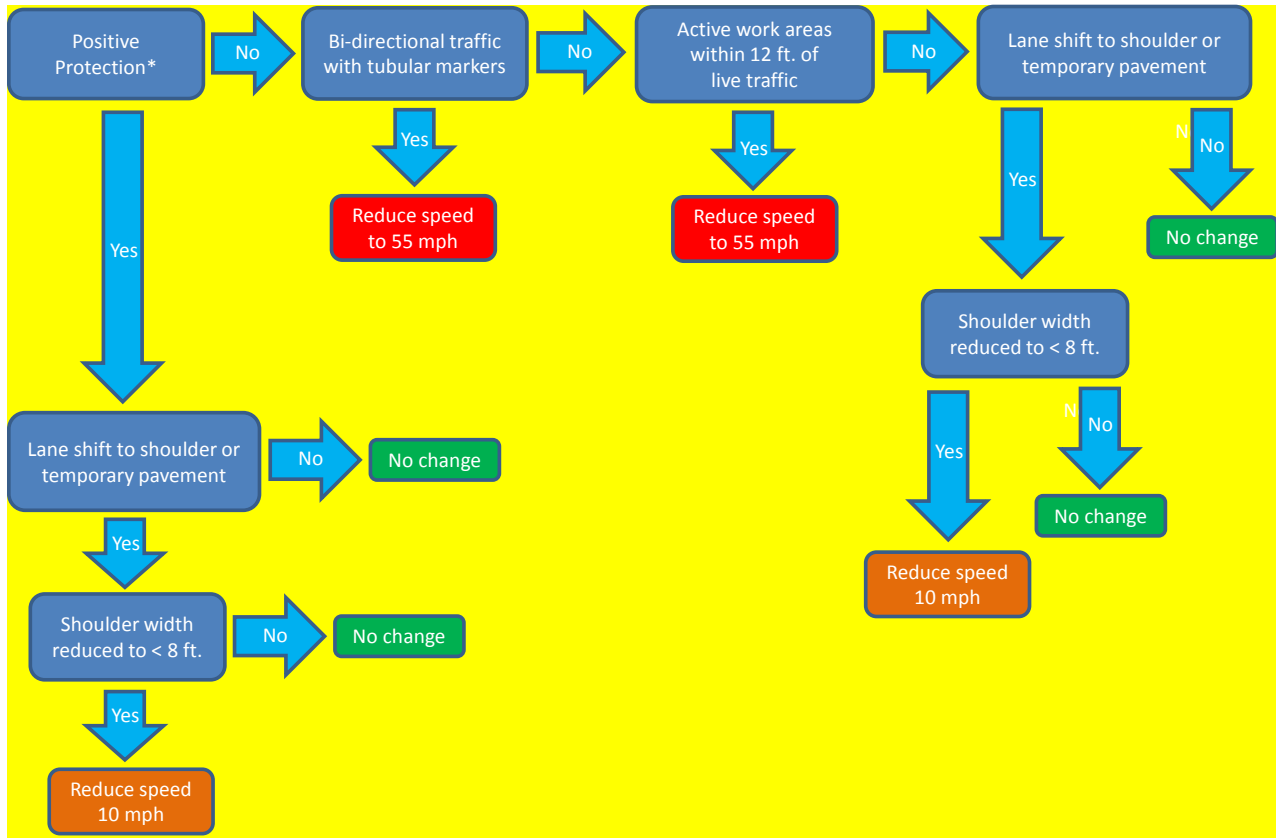
Speed reductions in segments without active work lead to disregard of the posted speed. When there is no work activity or traffic control devices are pulled back and lanes re-opened, the temporary speed limit *should* be removed. Work with your project manager to incorporate special provisions for removing temporary speed zones when there is no work activity.

Tables 1 and 2 and Figure 1 *should* be used, along with engineering judgment, to develop an appropriate work zone speed limit. The most restrictive work zone impact *should* be used as the determining condition.

Table 1. Temporary Traffic Control Zone Speed Limit Conditions





Work Zone Condition	Original Posted Speed Limit (mph)	Speed Limit Reduction (mph)
Lane width less than 12 ft.	65 - 70	Up to 10
	≤ 55	0
Lane shift to shoulder or temporary pavement	65 - 70	Up to 10
	≤ 55	0
Lane closure without positive protection	65 - 70	Up to 15
	≤ 55	0
Shoulder width less than 8 ft.	65 - 70	Up to 10
	≤ 55	0

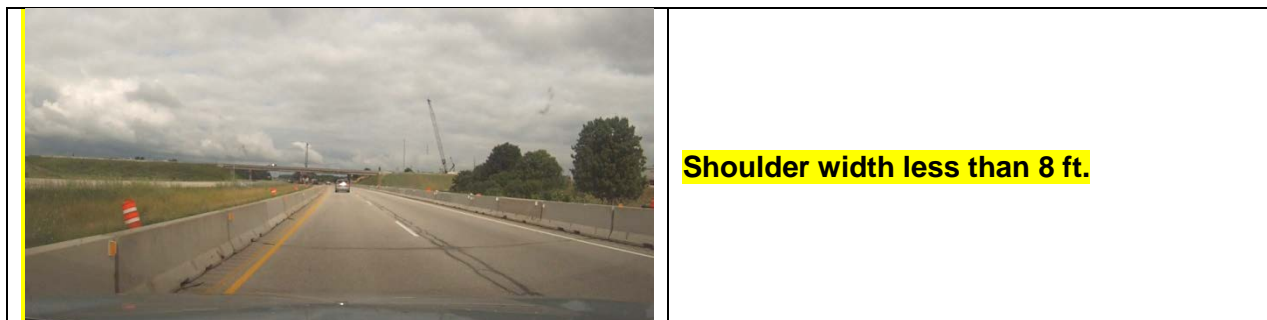
Figure 1. Temporary Traffic Control Zone Speed Limit Chart



*Positive protection is defined by FHWA as a temporary precast concrete barrier that contains or redirects vehicles and separates workers from the active travel lanes.

Table 2. Example Temporary Traffic Control Zone Scenarios

	<p>Bi-directional traffic separated by flexible tubular markers</p>
	<p>Active work areas within 12-ft. of live traffic without positive protection</p>
	<p>Lane shift to shoulder or temporary pavement</p>
	<p>Lane closure without positive protection</p>



D. Speed Zone Declarations

Reduced speed limits in temporary traffic control zones are subject to documented approval by the State Traffic Engineer or their delegate's approval identified as "Reviewer" on the Speed Zone Declaration. A Speed Zone Declaration **shall** be submitted through the Department's Speed Zone Application (Figure 2) found at the following link:

<https://webapp.dot.state.wi.us/speedzones/>

Requests for access to the Speed Zone Application should be sent to the State Traffic Safety Engineer in the Bureau of Traffic Operations.

The temporary speed zone requestor **shall** include justification for the speed zone request, supporting documentation including, but not limited to, temporary traffic control plans, construction project ID associated with the speed zone and an explanation of any exceptions to the policy criteria described above.

Where speed limit reductions in temporary traffic control zones are determined to be appropriate, the declaration *should* be written to indicate its association with the appropriate project so that a follow-up declaration to rescind is not necessary. A suggested format is:

Interstate Highway 94

*(). Fifty-five miles per hour from a point one mile west of County Trunk Highway "X" in Jefferson County, to a point 0.5 miles east of the roadway structures of State Trunk Highway 26 for the duration of construction of Project 1234-56-78. This speed limit declaration **shall** be effective only when workers are unprotected, there is active work within 12-ft. of live traffic, and the speed limit is posted by regulatory signing.*

For long-term work zones that overlap construction years, the Region **shall** denote the time period of the speed limit reduction during the appropriate construction year(s). Example:

This declaration is valid from the commencement of the active construction operations to the final conclusion of active construction operations during calendar year (CY) 2016 within WisDOT construction project ID XXXX-XX-XX.

Figure 2

Declaration	User Maintenance	Help	Logout
Speed Zone Declaration			
Add New Declaration <input type="button" value="Add Declaration"/>			
Declaration Search	Region: <input type="text" value="SW-Southwest"/>	County: <input type="text" value="Select County"/>	Municipality: <input type="text" value="Select CMTY"/>
	Highway No: <input type="text" value="Select RTE ID"/>	Declaration Year: <input type="text"/>	Status: <input type="text" value="Select Status"/>
		Type: <input type="text" value="Select Type"/>	<input type="button" value="Search"/>

Adding Speed Zone Declaration

CORRESPONDENCE/MEMORANDUM

Declaration Type: <input checked="" type="radio"/> Permanent Speed Zone Declaration		<input type="radio"/> Temporary Speed Zone Declaration	
Region: <input type="text" value="SW-Southwest"/>	County:** <input type="text" value="Select County"/>	Municipality: <input type="text" value="Select CMTY"/>	
Declaration ID: <input type="text" value="SZ - - - 2015** - 35"/> (SZ - County Code - Highway No - Year - Two Digit Sequence No)			
Submitter: <input type="text" value="SILVERSON, EMILY S"/>	Status: <input type="text" value="In Process"/>	Update User: <input type="text"/>	

STUDY LOCATION

Rescind Speed Zone Declaration: <input type="text"/>
Highway/Street Name:* <input type="text"/>
<input type="button" value="Add New Segment"/>
Total Segment Length (mi): <input type="text"/>
School Zone: <input type="checkbox"/>
Reason(s) for Speed Limit Change: <input type="text"/>

REQUEST FOR APPROVAL OF DECLARATION

BTO Approval Required:* <input type="radio"/> Yes <input type="radio"/> No	
Permanent Declaration:	
The following information supporting the recommendation is enclosed with this request:	
<input type="checkbox"/> Map showing limits	<input type="checkbox"/> Speed Study data
<input type="checkbox"/> Crash history data	<input type="checkbox"/> Aerial/site location photo(s)
<input type="checkbox"/> Documents of public interest	<input type="checkbox"/> Highway log files
Other (please specify): <input type="text"/>	
Additional comments that may be significant or noteworthy: <input type="text"/>	
Reasoning for omission of any information requested: <input type="text"/>	

** fields required for saving the declaration;
* fields required for submitting the declaration.