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**Traffic Engineering Instructions (TEI)**

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**APPROVED**  
By Joshua Schultz at 12:40 pm, Sep 15, 2016

**Approved:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Joshua Schultz, PE  
Transportation Systems Management and Operations Manager

**Subject: A Guide to Establishing Temporary Speed Limits in Highway Construction and Maintenance Work Zones**

**Administrative Information:**

- Effective Date:** TEI 16 - 603 shall be effective from the date of approval.
- Superseded TEI:** Not Applicable
- Exceptions:** Not Applicable
- Disposition of TEI Content:** The content of TEI 16 - 603 will be incorporated into future revisions to the Vermont Agency of Transportation Standard Drawings, Traffic Design Manual and/or other applicable design guidance documentation.

**Purpose:**  
The purpose of this document is to provide a uniform guideline outlining the proper layouts and procedures for implementing work zone speed limits primarily for use by VTrans personnel.

**Implementation:**  
The content of TEI 16 - 603 is to be implemented beginning immediately for all work zones on the State Highway System that meet the guidance set forth in this Traffic Engineering Instruction.

## A SUMMARY FOR ESTABLISHING TEMPORARY SPEED LIMITS IN HIGHWAY CONSTRUCTION AND MAINTENANCE WORK ZONES

There are several methods to provide speed control in work zones. These methods are Advisory Speed Limits, Work Zone Speed Limits and Temporary Speed Limits in a Construction Zone. The following is a field application summary:

METHOD	DESCRIPTION	EXAMPLES	AUTHORITY
Advisory Speed Limits (Road Conditions)	For driver safety, warning signs with advisory speed plaques, recommend the reduction of speed by the driver to safely negotiate potentially hazardous condition caused by work activity. <b>Advisory speed limits should be the first consideration.</b>	Bumps, low shoulders, drop-offs, curves, narrow lanes, sight distance restrictions or poor road surface.	Established by the District Transportation Administrator (DTA), Director of Construction & Materials Bureau Construction Engineer, or their designee.
Advisory Speed Limits (Workers)	For worker safety at spot locations and under temporary conditions. Warning signs alerts motorists that there are workers ahead.	Maintenance or construction operations at spot locations.	Established by the DTA, Director of Construction & Materials Bureau Construction Engineer, or their designee.
Work Zone Speed Limits	For worker safety, work zone speed limits are established in short-term projects <u>during continuous work activity</u> when the workers are present and are adjacent to moving traffic.	Pavement repair, bridge repair, loop detector installation and turn lanes, mill and overlay projects, concrete joint repair and crack sealing with multiple operations.	Established by the Director of Project Delivery Bureau (PDB), the District Transportation Administrator (DTA), Director of Construction & Materials Bureau Construction Engineer, or their designee.
Temporary Speed Limits in Construction Zones	Temporary speed limits in construction zones are regulatory speed zones intended for a <u>24 hour continuous posting</u> established in long term projects where it is <b>imperative</b> for the motorist to reduce speeds in order to safely navigate through hazards over the length of the project.	Bypasses, shoulder drop-offs, narrow lanes, grade separations, and pavement repair.	Established by the Director of Project Delivery Bureau (PDB), the District Transportation Administrator (DTA), Director of Construction & Materials Bureau Construction Engineer, or their designee.

## INTRODUCTION

### **Background**

Safety through the maintenance and construction work zones is an emphasis area for the Vermont Agency of Transportation (VTrans). Therefore, many improvements in work zone safety are being implemented. One of these improvements is the increased use of speed limits reductions and enforcement to control vehicle speeds through street and highway work zones. Proper and uniform application of these speed reductions should improve the safety for the highway worker, as well as the traveling public.

### **Purpose**

The purpose of this document is to provide a uniform guideline for the proper application of speed limits in street and highway work zones. This guide outlines the guidelines, proper layouts and procedures for implementing work zone speed limits primarily for use by VTrans personnel. Although it is usually desirable to provide all traffic controls as shown in state standards, situations do arise where this becomes impractical. Engineering judgment may dictate modifications to the State Standards and proposed traffic control plans. When modifications are made, factors such as traffic volume, speed, sight distance, type of work, etc. must be considered and should be documented in writing.

### **Scope**

The provisions of Vermont State Statute 23 V.S.A Section 1006a, "Highway Emergency Closure", and the current Manual on Uniform Traffic Control Devices (MUTCD), including guidance contained in this document, apply to all roadways under the jurisdiction of the State of Vermont.

### **Overview**

It has been shown that vehicle speeds are reduced by the placement of speed limit signs and the presence of active enforcement. The work zone speed limit should not be considered a "cure-all" for work zone safety problems, but only a portion of the overall project control plan. Advisory speed limits should be considered prior to instituting a regulatory work zone speed limit. Studies have shown a high level of compliance with the advisory signs and that there is little difference in traffic performance between regulatory and advisory signing.

It must be stressed that the safest work zone is one that minimizes the worker and motorist crash probability and does not present roadway conditions that violate driver expectations. This safe environment is created by strict and uniform adherence to the Manual on Uniform Traffic Control Devices (MUTCD) and Vermont State Standards (E- and T-Series). Speed limit reductions in the work zones should be used only when necessary and should be appropriate to the conditions or restrictive features present. Remember that reduced speed in a work zone is only one of the many traffic control techniques that can be used to safely guide the motorist through highway work zones.

### **Authority**

Modification of traffic controls or working conditions may be required to expedite safe traffic movement and to promote worker safety. The engineer or their representative has the authority to control the progress of work on the project with respect to obtaining safe conditions, including the authority to modify conditions or halt work until applicable or remedial safety measures are taken. This authority is supported by the specifications and additionally by State Statute. Each person whose actions affect temporary traffic control zone safety, from upper-level management personnel to field personnel,

should receive training appropriate to the job decisions each is required to make. Only those who are trained in safe traffic control practices, and who have a basic understanding of the principles established by applicable standards and regulations (the current MUTCD), should supervise the selection, placement and maintenance of traffic control devices in work zones.

Vermont Statues allow the Secretary of Transportation to authorize the establishment of reduced maximum speed limits in highway work zones. However, these limits should not be more than 15 miles per hour lower than the established speed limit for highways with a speed limit of 55 miles per hour or greater; and 10 miles per hour lower for highways with a speed limit of 50 miles per hour or less. The reduced speed limit becomes effective upon erection of appropriate signs designating the speed and indicating the beginning and end of the reduced speed zone.

### **Relation to Other Documents**

Other documents that are important to engineering personnel in selecting and providing safe work zones include:

- Manual on Uniform Traffic Control Devices (MUTCD) and its latest revisions
- The Standard Highway Sign and Pavement Marking Book (SHSP)
- VTrans State Statute Section 1006a, 1010, and 1025
- VTrans Construction Manual
- VTrans The Orange Book – A Handbook for Local Officials
- VTrans Standard Drawing

## **THE LAW**

### **Vermont State Statute - Title 23: Motor Vehicles, Chapter 13: Operations of Vehicles**

#### **§ 1006a. Highways; emergency closure**

(a) The Traffic Committee may close any part or all of any State highway to public travel to protect the health, safety, or welfare of the public. In such event, the Agency may maintain a detour comprising State or town highways, or both, around the closed section. If the Agency maintains a detour on a town highway, it shall be responsible for repairing any damage to the town highway caused by the detoured traffic.

(b) The Traffic Committee may establish a temporary speed limit within that portion of the State highways that is being reconstructed or maintained. The limit shall be effective when appropriate signs stating the limit are erected.

(c) Under 3 V.S.A. chapter 25, the Traffic Committee shall make and promulgate such rules as are necessary to administer this section and may delegate this authority to the Agency of Transportation.

(d) Notwithstanding the limit established in subsection 2302(d) of this title, the penalty for violation of speed limits established under subsection (b) of this section shall be twice the penalty for nonworksite speed violations. (Added 1975, No. 4, eff. Feb. 14, 1975; amended 1991, No. 15, § 1; 1997, No. 150 (Adj. Sess.), § 15; 2013, No. 167 (Adj. Sess.), § 19.)

#### **§ 1010. Special occasions; town highway maintenance**

(a) When it appears that traffic will be congested by reason of a public occasion or when a town highway is being reconstructed or maintained or where utilities are being installed, relocated, or maintained, the legislative body of a municipality may make special regulations as to the speed of motor vehicles, may exclude motor vehicles from town highways, and may make such traffic rules and regulations as the public good requires. However, signs indicating the special regulations must be conspicuously posted in and near all affected areas, giving as much notice as possible to the public so that alternative routes of travel could be considered.

(b) Notwithstanding the limit established in subsection 2302(d) of this title, the penalty for violation of speed limits established under the work site provision of this section shall be twice the penalty for nonwork site speed violations.

(Added 1971, No. 258 (Adj. Sess.), § 3, eff. March 1, 1973; amended 1991, No. 15, § 2; 1997, No. 150 (Adj. Sess.), § 16; 2009, No. 123 (Adj. Sess.), § 42.)

### § 1025. Standards

(a) The U.S. Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) for streets and highways as amended shall be the standards for all traffic control signs, signals, and markings within the State. The latest revision of the MUTCD shall be adopted upon its effective date except in the case of projects beyond a preliminary state of design that are anticipated to be constructed within two years of the otherwise applicable effective date; such projects may be constructed according to the MUTCD standards applicable at the design stage. Existing signs, signals, and markings shall be valid until such time as they are replaced or reconstructed. When new traffic control devices are erected or placed or existing traffic control devices are replaced or repaired the equipment, design, method of installation, placement, or repair shall conform to the MUTCD.

(b) The standards of the MUTCD shall apply for both State and local authorities as to traffic control devices under their respective jurisdiction.

(c) Traffic and control signals at intersections with exclusive pedestrian walk cycles shall be of sufficient duration to allow a pedestrian to leave the curb and travel across the roadway before opposing vehicles receive a green light. Determination of the length of the signal shall take into account the circumstances of persons with ambulatory disabilities. (Added 1971, No. 258 (Adj. Sess.), § 3, eff. March 1, 1973; amended 1975, No. 26; 1985, No. 138 (Adj. Sess.), § 5; 2009, No. 123 (Adj. Sess.), § 33; 2013, No. 96 (Adj. Sess.), § 145.)

## DOCUMENTATION

For enforcement and legal claims, it is necessary to accurately document the application of all regulatory speed limits in work zones. This documentation should accurately describe sign locations, direction of travel the sign's legend, dates/times the signs were installed and removed, and the numerical value of the limit. The sign locations should be referenced to physical features of the roadway, such as the distance from an intersection or reference (milepost) marker. It is suggested that each road authority adopt a proper method of documentation so these records may be used to establish the existence of the speed limit.

## ADVISORY SPEED PLAQUE

### DESCRIPTION



Warning signs with speed advisories should be used whenever an unexpected change in geometrics is caused by the work activity. This section addresses the use of advisory speed plaques in stationary work zones. The advisory speed plaque is intended to only supplement warning signs and is not intended to be used alone. Warning signs, with speed advisory plaques, identify the speed by the driver to safely negotiate a hazard or potentially hazardous condition. Drivers will reduce their speed if they clearly perceive a hazard.

**ADVISORY SPEEDS SHOULD BE THE FIRST CONSIDERATION WHEN ESTABLISHING SPEED LIMITS IN ANY WORK ZONE.**

Warning signs with speed advisories should be determined in advance. Prior work zones with similar activities should be used as a base in determining the necessary speed plaques. The work zone site should be test driven by the supervisor to confirm that the advisory speed is set at a reasonable value for the activity being performed. Advisory speed plaque (W13-1P) is further detailed in Part 6 of the current MUTCD. A very common application of *Advisory Speeds* is on crossovers for two-way bypasses. These speed limits also work well on bump signing often used on bituminous mill and overlay projects. Although *Advisory Speeds* are usually used to alert motorists to hazards to themselves, there is one special *Advisory Speed* in which this is not the case. The *Advisory Speed (Worker)* is used to alert

motorists to workers ahead and is used in conjunction with the “Worker Ahead” W21-1 warning sign. Unlike other worker speed limits, the *Advisory Speed (Worker)* is meant to be used only at spot locations. Additional signs may be used in very long work zones.

## AUTHORITY

A speed limit authorization from the Secretary of Transportation is not required to establish an *Advisory Speeds*. The District Traffic Engineer and/or responsible local road authority is authorized to determine the use of advisory speed plaque. When this authority has been delegated down to front line supervisors, it is important that the same person should always establish the speed limit. Experienced judgment is sometimes the only indicator of the reasonable speed to be posted. Traffic Engineering personnel should be contacted whenever there is any doubt as to what the value should be.

## SIGN SIZE AND MOUNTING

The speed advisory plate (W13-1) shall be black legend and border on orange background when used in construction and/or maintenance work zones. Advisory speed plaques shall be minimum 18" x 18". When used with 36" or larger warning signs, advisory speed plaques shall be minimum 24" x 24". When used, the plaque shall be mounted below the warning sign on the same assembly. The bottom of the speed advisory plaque shall be at least one foot above the pavement elevation. The standard sizes described above are the minimum sizes allowed for application on high-speed streets or highways as defined in the MUTCD. However, applications on higher volume and higher speed highways, such as freeways and expressways, should use larger signs to provide adequate target value and legibility.

## Work Zone Speed Limits



### DESCRIPTION

*Work Zone Speed Limits* are regulatory speed limits generally established in short term stationary work zones for construction or maintenance operations to improve worker and motorist safety. These limits are intended for use where the work area and workers are adjacent to traveled lane(s) open to vehicular traffic. This usually occurs in lane closures on multi-lane streets or highways. Work Zone speed limits are **not** to be used on mobile or moving operations, bypasses or detours. Also, when flaggers are used to provide control on a lane closure on two-lane two-way streets or highways, work zone speed limits should **not** be used.

The work zone speed limit signs shall only be posted in the traffic control zone **during continuous worker activity** while performing construction or maintenance operations. Overuse of the *Work Zone Speed Limit* will reduce the effectiveness; therefore, these must be prudently applied where the motorist can perceive the need to reduce speeds. During periods of inactivity or when the traffic controls are removed from the roadway, the speed limit signs shall be covered or removed. This means installing signs at the beginning of a work shift and removing signs at the end of the shift. The speed limit is only in effect when the signs are installed and visible to traffic.

There are two different applications for short term work zone speed limits.

1. When there is a single work area in which the work activity is concentrated (a single work crew work zone). In the single crew work zone, the speed limit is only applicable at the location within the work zone that the workers are active. Otherwise, the drivers will be allowed to travel at a safe speed the remainder of the work zone.

2. When there is two or more work areas located with the work zone (a multiple crew work zone). In the multiple crew work zone, the speed limit is present for the entire length of the work zone, because of the number of workers and the multiple number of work areas.

If two or more crews are working and are separated by a distance of two miles or greater, then each crew location shall be signed separately. If multiple work crews are working within a two mile or less stretch of highway and all work is occurring in that area then a single sign package is necessary.

The use of the *Work Zone Speed Limit* should be determined in advance. Prior work zones with similar activities should be used as a base in determining the necessary speed limit. The work zone site should be test driven to confirm that the work zone speed limit is set at a reasonable value for the activity being performed and the potential hazards encountered by the motorists.

Some hazards near the work area may still require warning signs, but it is intended that the regulatory speed limit reduce drivers' speed such that the majority of hazards can be safely negotiated. Severe hazards at spot locations may still require an additional speed advisory to slow the motorist even more.

## AUTHORITY

The Vermont State Statutes allow the Secretary of Transportation, (who has delegated the authority for signature approval to certify designating a Temporary Speed Limit on Interstate, State or U.S. Highways to the Director of Project Delivery Bureau or the Director of Construction & Maintenance Bureau or the District Transportation Administrator) to authorize the use of reduced maximum speed limits in highway work zones. However, these limits should not be more than 15 miles per hour lower than the established posted speed limit for highways with a speed limit of 55 miles per hour or greater; and 10 miles per hour lower on highways with a posted speed limit of 50 miles per hour or less. The reduced speed limit becomes effective upon erection of appropriate sign designating the work zone speed and indicating the beginning and end of the reduced speed zone.

## SIGN SIZE AND MOUNTING

A *Work Zone Speed Limit* assembly shall consist of a black and white SPEED LIMIT sign (R2-1) with a black and orange WORK ZONE plaque (G20-5aP) installed above the SPEED LIMIT sign. The FINES DOUBLE FOR SPEEDING IN THE WORK ZONE sign (VR-355) consisting of a black legend and border on a white back ground is required to be installed in order to enforce the work zone speed limit. However, this sign may be omitted from the sign package progression if a FINES DOUBLE plaque (R2-6aP) is installed below the work zone speed limit on the same assembly. Applications on multi-lane highways, such as expressways and freeways, require signs to be placed on both the right and left side of the travel lane (gate-posted). Refer to Vermont State Standard T-11 Construction Approach signing on Divided Highways One Lane Closed and T-12 Traffic Control Divided Highway One Lane Closed for sign layouts.



When the *Work Zone Speed Limit* calls for a reduction in speed that results in a difference in speeds of 10 - 15 MPH from the preceding speed zone, then a SPEED REDUCTION (W3-5) sign should be used. When this sign is posted with the temporary mounted advance warning sign series, it must be mounted at least one foot above the pavement. If the advance warning series is mounted on post driven structures or attached to other fixtures, all signs should be mounted at the same height. In rural areas this requires the bottom of sign to be 5 feet above the pavement and 7 feet in urban areas. If the *Work*

*Zone Speed Limit* is not in effect then the speed reduction sign should be covered or removed in addition to the speed limit assemblies.

The *Work Zone Speed Limit* assemblies may be mounted on temporary stands such that they can be easily removed or may be mounted on posts driven into the ground and covered when not needed. When post mounted, the bottom of any sign assembly should be least 5 feet above the pavement in rural areas and at least 7 feet above the pavement in urban areas. Do not use flashers on the signs, but orange flags may supplement the signs if additional target value is desired.

The final speed limit sign showing that the posted speed has resumed shall be placed a minimum of 500 feet beyond the END ROAD WORK (20-2) sign. The sign does not have to be used if there is an existing posted standard speed limit sign approximately 500 feet from the end of the work area to inform the drivers that the speed limit has resumed to the highways posted speed limit and the work zone speed limit has ended.

## Temporary Speed Limits in a Construction Zone

WORK ZONE	DESCRIPTION
SPEED LIMIT 50	<p><i>Temporary Construction Speed Limits</i> are regulatory speed zones established in long term construction and/or maintenance projects when the physical features or the roadway or the work zone require lower vehicle speeds. The <i>Temporary Construction Speed Limit</i> is intended for a <b>24-hour, 7-days a week continuous posting</b> so, unlike the <i>Work Zone Speed Limit</i>; they are not taken down at the end of the work shift. The temporary speed limit goes into effect when the signs are posted.</p>
FINES DOUBLE	

*Temporary Construction Speed Limits* should be used when the roadway construction environment will continuously dictate a reduced speed and it is imperative for the motorist to reduce speed in order to safely navigate geometrics or hazards that may be encountered over the length of the project. Since the signs will be posted 24 hours a day, 7 days a week, the primary reasons to establish the limit should also be present 24 hours a day. Construction conditions that would warrant the inclusion of a *Temporary Construction Speed Limits* within the work zone that extends 1 mile or greater should include, but are not limited to:

- Edge drop offs
- Equipment, workers or non-shielded objects in the clear zone
- Rough pavement
- Major change in alignment
- Reduced shoulder width
- Temporary guardrail or barrier
- Lane closure
- Construction entrances
- Sight distance restrictions

Also, it should be noted that some Work Zone conditions used to justify reduced speed limits in work zones (i.e. construction entrances, turning traffic, crash history, etc.) are not adequately perceived by motorists and thus are in the most need of enforcement since motorists are less likely to reduce their speeds voluntarily.

*Temporary Construction Speed Limits* can be installed on highways being used as detours. A complete layout of the proposed detour route along with the projected increase in the average daily traffic (ADT) should be submitted to the Transportation Systems & Management & Operation – Traffic Operations Section who will perform a desk review for comments on the detour routes. This information shall be based from the information identified in the Traffic Management Plan developed for this project. The District Maintenance Office for the area(s) that the detour will traverse shall be contacted, since the increase in traffic may cause accelerated deterioration of the roadway surfaces in lower design facilities. It is important to keep road surfaces in adequate condition to reflect the safe speed determined by the initial study and it is important that a commitment is made to maintain the road in a safe condition for the recommended speed limit. Speed limit authorizations will be sent to the applicable road authorities with a beginning date and an ending date of the temporary speed limit. The speed limits will be in effect when the signs are posted.

It should be noted that these detours are typically not under construction; therefore *Workers Present Speed Limits* are not appropriate. It is also not appropriate to have higher fines on speeding citations in these areas since there are no workers or construction involved. Authorization of a normal regulatory speed limit, for a temporary time frame, should be used in these instances only when added traffic volumes create significant safety concerns based on engineering judgement for:

- Pedestrian crossings,
- Bicycle routes,
- Intersection movements become compromised
- Overloading traffic signal queues

## **AUTHORITY**

All *Temporary Construction Speed Limits* must be authorized by the Secretary of Transportation, who has delegated the authority for signature approval to certify designating a Temporary Speed Limit on Interstate, State or U.S. Highways to the Director of Project Delivery Bureau or the Director of Construction & Maintenance Bureau or the District Transportation Administrator. These limits should not be more than 15 miles per hour lower than the established posted speed limit for highways with a speed limit of 55 miles per hour or greater; and 10 miles per hour lower on highways with a posted speed limit of 50 miles per hour or less. However, the speed limit on temporary roadways should be based on their design speed; geometric constraints may require reducing the speed limit more than 15 mph, in which case the speed limit should be “stepped down” in increments of 10 to 15 mph (for example, on a temporary bridge approach with a severe curve, the speed limit might be stepped down from 50 to 35 to 25). The reduced speed limit becomes effective upon erection of appropriate sign designating the work zone speed and indicating the beginning and end of the reduced speed zone.

## **SIGN SIZE AND MOUNTING**

A *Temporary Construction Speed Limit* assembly shall consist of a black and white SPEED LIMIT sign (R2-1) with a black and orange WORK ZONE plaque (G20-5aP) installed above the SPEED LIMIT sign. The FINES DOUBLE FOR SPEEDING IN THE WORK ZONE sign (VR-355) consisting of a black legend and border on a white back ground is required to be installed in order to enforce the construction speed limit. However, this sign may be omitted from the sign package progression if a FINES DOUBLE plaque (R2-6aP) is installed below the work zone speed limit on the same assembly. Applications on multi-lane highways, such as expressways and freeways, require signs to be placed on both the right and left side of the travel lane



(gate-posted). Refer to Vermont State Standard T-11 Construction Approach signing on Divided Highways One Lane Closed and T-12 Traffic Control Divided Highway One Lane Closed for sign layouts.

When the *Temporary Construction Speed Limit* calls for a reduction in speed that results in a difference in speeds of 10 - 15 MPH from the preceding speed zone, then a SPEED REDUCTION (W3-5) sign should be used. When the *Temporary Construction Speed Limit* is not in effect then the temporary speed reduction signs shall be covered or removed.

The temporary speed limit signs should be placed on posts on the side of the road open to thru traffic. Signs should not be erected in the closed lane since construction equipment and channelizers may obstruct visibility of the signs. Erect the first sign where drivers need to reduce their speed and erect confirming speed limit signs as specified in the following chart:

Typical Spacing For Temporary Construction Speed Limit Signs in Work Zones	
Construction Speed Limit	Confirming speed limit sign spacing
20 – 25 MPH	¼ mile
30 – 35 MPH	½ mile
40 – 45 MPH	¾ mile
50 MPH or greater	1 mile
Note that the spacing noted above are minimums and consideration for follow-up signs after major intersection should be considered.	

The *Temporary Construction Speed Limit* assemblies shall be regulatory SPEED LIMIT signs (R2-1) and ground mounted. The spacing of the succeeding temporary construction speed limit shall be in accordance with the “Typical Spacing for Temporary Construction Speed Limit Signs in Work Zones” chart shown above. These signs maybe supplemented with orange flags, but not flashers. The bottom of any sign assembly should be at least 5 feet above the pavement in rural areas and at least 7 feet above the pavement in urban areas.

The concluding sign shall be placed a minimum of 500 feet beyond the END ROAD WORK (G20-2) sign. This sign does not have to be used if there is an existing posted standard speed limit sign approximately 500 feet from the end of the work area is in place to inform the drivers that the temporary construction speed limit has ended.

### PRECAUTIONS

It should be noted that when no work zone conditions are apparent, motorists only slightly decrease their speed downstream of the work zone speed limit signs as they travel through the work zone. Therefore, leaving reduced work zone speed limits in place when conditions do not warrant leads to high levels of non-compliance. In order to maintain the credibility of work zone speed limits, signs and other devices used to reduced speeds should be covered or removed when no work is occurring and other hazardous conditions are not present. Motorists tend to decrease their speeds in work zones only when they perceive a need to; however, the amount of speed reduction dependent upon the normal operating speeds of the roadway, the imposing nature of the situation. Radar Speed Feedback signs have also been found to be effective in reducing speeds, especially in combination with enforcement activities.

# Appendix

**Acknowledgement** This guideline was excerpted and modified from a publication done by the Minnesota Department of Transportation's Office of Traffic Engineering, dated January 2002. The booklet is entitled, "A Guide to Establishing Speed Limits in the Highway Work Zones".

## Certificate for Construction and Maintenance Work Zone – Form

For planned projects under design and construction, the Project Delivery Bureau and Construction & Materials Bureau Directors have been granted the authority to approve temporary speed certificates.

Typically the State of Vermont allows for a 15 mph reduction in posted speed limit on limited access highways and a 10 mph reduction on non-limited access highways (2-lane typical). Please submit the completed draft form to the Transportation Systems Management & Operations (TSMO), Traffic Operations Engineer for review and processing. The TSMO section will circulate the form for signatures and return the approved form when completed with signatures.

Certificate for Construction and Maintenance Work Zone

STATE OF VERMONT

CERTIFIED STATEMENT DESIGNATING A TEMPORARY  
SPEED LIMIT ON THE INTERSTATE, STATE OR U.S. HIGHWAY SYSTEM

*In accordance with Title 23, Vermont Statutes Annotated, Section 1006a, a temporary speed limit is hereby designated for the section of highway described below.*

Project or Town Name: \_\_\_\_\_

Project Number (if Applicable) \_\_\_\_\_

Route No. \_\_\_\_\_

Current Posted Speed Limit \_\_\_\_\_

Proposed Temporary Speed Limit \_\_\_\_\_

Approximate Mile points **SEE ATTACHED LIST**

Anticipated Dates From \_\_\_\_\_ Thru \_\_\_\_\_

Requested By \_\_\_\_\_ Date \_\_\_\_\_

*The official signs designating the foregoing speed limit will be erected and removed as directed by the Agency of Transportation. The temporary speed limit will be in effect when the related signs are posted. Removal or covering of the signs by the Agency shall return the speed limit to its previous status. The anticipated from/thru dates indicated may be extended thirty days without a new certificate.*

Approved by \_\_\_\_\_ Date \_\_\_\_\_

Title Director of Project Delivery Bureau or  
Director of Construction & Materials Bureau or  
District Transportation Administrator

Original to: \*\*, Traffic Operations Engineer

Copy to: \*\*, Field Force Commander, Dept. of Public Safety  
\*\*, Dept. of Public Safety  
\*\*, Dept. of Public Safety  
\*\*, DMV Commercial Enforcement Unit  
\*\*, Construction Section  
\*\*, Regional Construction Engineer  
\*\*, District Transportation Administrator # \_\_\_\_\_  
\*\*, (Requestor, Title)

