MAXIMUM LANE CLOSURES ON INTERSTATE AND HIGH-SPEED MULTILANE HIGHWAYS

Per Policy DOT-OS-OC-8.3 Work Zones for Interstate and High-Speed Multilane Highways, lane closures on these facilities shall be no longer than five miles in length without prior approval from either the Construction and Maintenance Engineer or the Director of Operations. Requests for longer lane closures may be submitted via email and shall include justification for the request. Exceptions will be determined on a case-by-case basis; however, they will not be granted if the sole reasoning is that the Contractor’s operations will be faster or more efficient with less impact to the traveling public, as this is generally true for all lane closures.

Lane closures up to 10 miles in length may be allowed for one day or less for construction work with very high production rates (i.e., shoulder chip seals). More than one lane closure may be permitted; however, there will be a minimum of a three-mile section between lane closures, excluding taper section.

This policy applies to Interstate and highways with more than one lane in each direction and posted speed limits greater than 45 mph. The five mile lane closure maximum does not apply to head-to-head traffic on these facilities.

WORK ZONE SPEED REDUCTIONS

The following is to be used as guidance when selecting projects to use additional measures for work zone speed control and determining how to utilize those measures within the work zone. The intent of reducing driver speeds within the work zone is to promote safe and efficient traffic flow, as well as to enhance the ability of traffic to safely react to highway work zones and disruptions in traffic flow.

The use of any of the following measures does not eliminate the need for standard advance warning signs or other traffic control devices. First and foremost, the use of proper temporary traffic control is critical to warn drivers of work zone hazards. Some work zones may then also need supplemental measures to further improve safety if crash or other data suggests such a safety hazard exists.

Establish realistic design speeds and work zone speed limits during the planning and design of the temporary traffic control plan. Reduced speeds should only be posted in the vicinity of work being performed or where necessitated by road conditions.

Work Zone Speed Limit Reductions

Per SDCL 32-25-19.1, the Secretary of Transportation has the authority to establish limited speed zones through highway work areas on the state trunk highways. Policy DOT-OS-OT-12.0 Speed Zones through Highway Work Zones provides the procedures for creating limited speed zones.

A letter requesting the appropriate speed limit reduction shall be sent to the Operations Traffic Engineer, and shall include information on the work being done on the project, the speed limit requested and whether it will be in effect 24 hours a day, only while lane closures are present,
or only while workers are present. The begin and end MRMs for the reduced speed limit as well
as the approximate start and end dates for the reduction also need to be included, along with
justification for the reduction.

The letter is sent to the Director of Operations, the Secretary of Transportation, the Secretary of
Public Safety, and the Director of Highway Patrol via email for their approval. Signed copies of
the request letter are no longer obtained and will therefore not be sent to the requesting
Department staff. The Operations Traffic Engineer will keep a copy of the letter and each email
approval on file.

While approvals are generally obtained rather quickly, it is recommended that the requests be
sent in as soon as possible, but at least one week prior to the anticipated start date for the
speed limit reduction. If approvals have not been obtained, the speed limit is not enforceable
and shall not be posted in the work zone. The Operations Traffic Engineer will notify the
requestor when confirmation of approval has been received.

Signing of the work zone speed reductions shall be according to Policy DOT-OS-OT-12.0.
Speed reductions on Interstate and high speed multi-lane highways shall also refer to Standard
Plate 634.63. It is important that any signs for speed reductions intended to be in effect only
during certain conditions be covered or removed when the condition does not exist. An example
of this is the 45 mph signs for the workers present condition – when workers are not present in
the work zone the signs need to be removed or covered.

**DOT Cop Program**

While it is recognized that law enforcement can be effective at reducing speeding and
undesirable driving behaviors in the work zone, keep in mind that law enforcement officers face
many of the same types of hazards that highway works face out on the roadway.

There are no criteria for which routes are eligible for the DOT Cop program but most Areas
focus their efforts on the interstate. DOT Cop Enforcement should be considered when:

- Complex or very short term changes in traffic patterns with significant potential for road user confusion or worker risk from traffic exposure.
- Existing traffic conditions and crash histories that indicate a potential for substantial safety and congestion impacts related to the work zone activity, and that may be mitigated by improved driver behavior and awareness of the work zone.
- High-speed roadways where unexpected or sudden traffic queueing is anticipated, especially if the queue forms a considerable distance in advance of the work zone or immediately adjacent to the work space.
- Night work operations that create substantial traffic safety risks for workers and road users.
- RSFS devices have been deployed a reduction in vehicle speeds has not been achieved.

Work zone enforcement needs represent an additional burden on enforcement agency manpower and equipment resources in a region. Therefore, if enforcement is to be used, it
should be to address specific hazards, and the strategy used should be capable of minimizing those hazards.

Each year in the spring, the Area Engineers should meet with Highway Patrol to discuss the year’s upcoming construction projects. Highway Patrol solicits volunteers from their staff and we strongly encourage only those who intend to work the program sign up, if someone changes their mind they can be signed up later.

The Area’s administrative staff then provides the officers with a seasonal application and a non-permanent payroll form (only fill out section A), complete the back and sign. These get sent to the Region Operations Engineer who signs them and they are forwarded to the Human Resource Specialist with the Bureau of Human Resources, where they are loaded into TKS. The Region Traffic Engineer signs off on their time forms each period. The sergeants may periodically provide a summary of the DOT Cop patrol hours.

The number of DOT Cop hours for each Region is based on the Operations Support office’s budget for the program. The Construction and Maintenance Engineer will let the Regions know approximately how many hours have been budgeted for the fiscal year. If a Region does not think they will use all these hours, they should let the Operations Support office and the other Regions know in case they would be able to use them.

For work zones where traffic demands do not justify the use of enforcement or where enforcement needs exceed enforcement resources, other speed management technologies and supplements can be considered for implementation in the work zone.

**Radar Speed Feedback Signs**

Radar Speed Feedback Signs (RSFS) display real-time vehicle speeds, alerting drivers to the speed they are traveling and reminding them of the posted or advisory speed limit.

RSFS should be used in work zones where there is a need for drivers to reduce their speed, as determined by the Region Traffic Engineer. Consider the use of RSFS in work zones where the following conditions exist:

- Interstate projects where work zone speed reductions to 45 mph are utilized or where there is closure of one or more travel lanes and workers are present in the adjacent lanes
- Where queueing, slowed traffic (beyond the posted or work zone speed limit), or rear end collisions are anticipated in an open lane (not signal or flagger controlled)
- Work zone crashes of concern are occurring
- Where an excessive number of vehicles exceed the posted speed limit
- Speed differential issues, which can be signified by queue formations
- When higher than normal traffic volumes are expected (such as during the Sturgis Motorcycle Rally)
- Night work operations
- Work area ingress and egress by construction vehicles requires the traveling public to reduce their speeds
- Horizontal curvature at median crossovers designed to a lower design speed than existing or prevailing speeds
The RSFS shall be mounted above, below, or beside the regulatory speed limit sign. If the RSFS is used to supplement an advisory speed, it should be mounted beside the warning/advisory speed combination sign.

The following guidelines should be used for the placement of RSFS within a work zone:

- RSFS should be placed upstream (in advance of) the work zone activity area.
- The RSFS unit and any associated solar panels shall be installed so as not to restrict lateral clearance or sight distances of other traffic control devices in the area.
- RSFS should be placed on the right-hand side of the highway and aligned to provide maximum legibility to approaching traffic.
- RSFS should be placed on the shoulder where sufficient space exits, or in the lane closed to traffic where shoulder widths are too narrow.

Within advisory speed zones or work zone speed limit zones, temporary RSFS devices are typically trailer-mounted, but vehicle mounted or other temporary sign mounting systems may be allowed. Truck- or trailer-mounted RSFS are a category 4 NCHRP 350 device. Current FHWA guidance for these devices includes that crash testing is currently not required, so these devices should be shielded where possible and removed when not needed or used. The devices must be delineated with a minimum of two drums.

The devices shall read “YOUR SPEED” as a static message centered on the sign. Legend and background colors of this static sign shall match the regulatory or advisory speed sign it is paired with. The changeable portion of the RSFS shall have a black background with an amber illuminated legend.

The changeable message portion of the sign shall display the speed of the approaching vehicle as two digits in MPH. The changeable message portion of the sign shall not flash. The RSFS shall be blank when no vehicles are present. Numeral height should be 18” for Interstate and at least 15” for other roadways.

RSFS installed in temporary speed zones should operate for the time period that the speed zone is in effect.