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## Other Work Zone Considerations

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### A. Flagging in Work Zones

Flagging is commonly considered one of the most dangerous jobs in temporary traffic control. Visibility and recognition by drivers are very important for safe and efficient flagger operations. Iowa has adopted even more stringent standards for flagging activities; these are described in the [Iowa DOT's \*Flagger's Handbook\*](#) and should be carefully reviewed before beginning any flagging activities.

### B. High-Visibility Safety Apparel

All workers within the right-of-way who are exposed either to traffic (vehicles using the road/street for purposes of travel) or to work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107 publication entitled "American National Standards for High-Visibility Safety Apparel and Headwear" or equivalent revisions.

### C. Nighttime Operations

MUTCD Section 6G.19 offers guidance and advice for temporary traffic control measures for nighttime operations. Traffic volumes are reduced at night, but the number of impaired drivers may increase. Impaired drivers and reduced visibility mean that additional steps need to be taken to ensure safe and efficient working conditions. Work areas should be lighted to provide adequate visibility for work tasks and road users. Lighting shall not produce a disabling glare condition for approaching road users, flaggers, or workers. MUTCD Section 6F.82 describes specific requirements for lighting during night hours. Size and type of luminaries, mounting height, pole location, and positioning are all specified. The performance of the lighting should be observed immediately after implementation and then periodically during use. For flagging at night, comply with the [Iowa DOT's \*Flagger's Handbook\*](#).

### D. Accommodation of Pedestrians and Bicyclists

The MUTCD requires all road users to be controlled throughout work zones, including motorists, bicyclists, and pedestrians. When urban streets are being improved, needs of pedestrians and bicyclists should receive as much attention as the needs of motorists.

- 1. Pedestrians:** The Americans with Disabilities Act of 1990 requires suitable access for persons with disabilities, even in work areas. Temporary traffic control for pedestrians should consider the special needs of disabled pedestrians, including those with visual disabilities. MUTCD Sections 6D.01 and 6D.02 provides guidance for planning temporary traffic control for pedestrians:
  - Pedestrians should not be led into conflicts with vehicles or work zone equipment.
  - A safe and convenient path should be provided for pedestrians, closely replicating existing sidewalks.

Pedestrians shall be notified in advance if sidewalks will be closed. The MUTCD requires standard signs to be supplemented with alternative warnings such as audible messages or instructions to aid visually impaired pedestrians, if such a need is identified. In addition, a firm, stable, and slip resistant surface should be provided throughout the entire length of any temporary pedestrian facility. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be an obstacle to wheelchair use.

To avoid conflicts with work zone activities, pedestrian travel may need to be diverted. Moving work equipment across designated pedestrian paths should be avoided or at least minimized. Temporary traffic barriers should be considered for safe separation when vehicular and pedestrian paths are relocated close together in long-term work areas. Mesh fencing, caution tape, rope, or chain strung between traffic control devices will not comply with standards in PROWAG and should not be used.

For additional guidance, refer to MUTCD Chapter 6D, [SUDAS Design Manual Chapter 12](#), and the Field Guide for Pedestrian Accommodation in Work Zones (FHWA Grant DTFH61-13-H-00025).

- 2. Bicyclists:** Proper planning for bicyclists through and along work zones is as important as planning for motor vehicle traffic, especially in urban and suburban areas. According to the MUTCD, if the TTC zone affects the movement of bicyclists, adequate access to the roadway or shared use path shall be provided. On low volume roads or short work zones, standard traffic control practices are usually adequate. It is important to remove temporary signing, debris, and other obstructions from the edge of the roadway, bike lane, or shared use path after each day's work.

If a bike facility detour involves significant out of direction or distance travel, bicyclists will prefer to ride through the work zone. It is preferable to allow bicyclists to proceed as close to their original route as possible. On longer projects, a temporary bike lane or a wide travel lane may be needed. Advance work zone signs should not obstruct the bicyclist's path. Signs should be placed on the shoulder or planting strip rather than in the bike lane or on the shared use path. For additional guidance, refer to the AASHTO Guide for the Development of Bicycle Facilities, 4th Edition.

## E. Road and Street Closures

Roadway improvements can generally be accomplished more efficiently and safely when vehicular traffic is detoured from the work area. However, access for local property owners and commercial interests must be maintained in many situations. Even though a street or road section is closed by official action, the agency must still consider appropriate temporary traffic control measures in that area even if only for local public traffic. Properly using specific regulatory signs is required.

Traffic control for closures can be considered in two different applications: outside the work area and inside the actual closed street or road section. MUTCD Part 6 includes specific requirements and guidance for temporary traffic control associated with closures.

When safety fence is needed, provide orange plastic mesh containing ultraviolet stabilizers with a height of 48 inches  $\pm$  2 inches. Maximum aperture opening of a nominal 4.5 square inches. Connect to posts or drums to keep the safety fence upright and tight. In lieu of safety fence, Type III barricades may be placed continuously across the pavement, including shoulders if present.

While the messages on the following signs may seem similar, each must be used appropriately:

- ROAD (STREET) CLOSED (R11-2),
- LOCAL TRAFFIC ONLY signs (R11-3a), and
- ROAD CLOSED TO THRU TRAFFIC (R11-4).

MUTCD Section 6F.08 states that the ROAD (STREET) CLOSED (R11-2) sign shall not be used where road users are allowed to pass. When local access (vehicular or pedestrian) is allowed in closed street or road sections, be sure to maintain an appropriate level of temporary traffic control, including

- warning signs
- barricades and other channelizing devices at drop-offs, and
- fencing of excavations

## **F. Business Access**

Providing clearly defined, continuous access to businesses along the construction area is critical to the success of a long duration traffic control setup. The only time a business access should be closed is when it falls within the activity area. When that situation occurs, consideration should be given to cross easements between properties and temporary access connecting adjacent properties. Signage indicating alternate business access points should be added to the temporary traffic control setup.