MIOSHA Fact Sheet

Construction Safety & Health Division

Working Safely on Roadways

Each year MIOSHA investigates several serious and fatal accidents that occur while performing work activities on our roads, bridges, and right-of-ways.

What is the definition of road work?
Road work consists of any construction, maintenance or utility work performed within a public right-of-way. Road work encompasses a wide variety of tools, equipment and activities. Work operations can vary from long term projects such as resurfacing a country road or building a new bridge over an existing expressway; to shorter term projects such as repairing a traffic signal from an aerial lift or patching pot holes.

Road work is typically temporary and has constantly changing conditions that could be unexpected by motorists. This creates an even higher degree of vulnerability and exposure to workers on or near the roadway. It is imperative that employers receive appropriate training prior to performing work on or adjacent to the roadway.

Part 22 – Signs, Signals Tags, and Barricades.
Rule 2223(1) is the most widely applicable rule for working on roadways. This rule is also referenced in Construction Safety Standard – Part 32 and General Industry Standard - Part 58 when using aerial lifts on roadways or rights-of-ways.

Rule 2223(1) states that traffic control devices shall be installed and maintained as prescribed in Part 6 of the 2005 MMUTCD (Michigan Manual of Uniform Traffic Control Devices).

What is the Michigan Manual of Uniform Traffic Control Devices (MMUTCD)?
The MMUTCD has specific procedures and guidance for keeping road workers, motorists, bicyclists, pedestrians, enforcement/emergency officials, and equipment safe during road construction and maintenance.

Employers are required to develop a Temporary Traffic Control (TTC) plan which meets the requirements of Part 6 of the 2005 MMUTCD before allowing employees to work on a roadway or within a right-of-way. Part 6 of the MMUTCD is available on the Michigan Department of Transportation website at www.michigan.gov.mdot.

Temporary Traffic Control (TTC) Plans.
TTC plans can range from being very detailed to simply referencing typical drawings in the MMUTCD. This depends on the nature and complexity of the work operation for each project. The design, selection and placement of temporary traffic control devices should always be based on engineering judgment and prepared by a qualified person.

The TTC plan must take into consideration several components such as the work location, duration of project, traffic volume, traffic speed, and scope of work. Although there are a wide variety of work zone conditions that are addressed and outlined in the MMUTCD, there will always be work zones that present unique situations and problems. In these cases a qualified person must be consulted to resolve the difficulties with typical temporary traffic control applications. A TTC plan should be available to personnel at the site in order to ensure proper installation and maintenance of temporary traffic control devices throughout the work zone.

Typical Components of a Temporary Traffic Control Plan.

The Advance Warning Area is the section of roadway where road users are informed about the upcoming work zone. This area may vary from a single sign, high-intensity rotating, flashing, oscillating, or strobe lights on a vehicle, to a series of signs in advance of the work zone.

The Transition Area is the section of roadway where road users are redirected out of their normal path, usually involving strategic use of tapers.

The Activity Area is the section of roadway where the work activity takes place comprising the traffic space, the buffer space and the work zone.

- Traffic spaces are the portion of the roadway in which road users are routed through the work activity area.
- The buffer space is an area that separates road user flow from the work space or from an unsafe area and might provide some recovery space for an errant vehicle. No work activity, equipment, materials or vehicles is allowed in the buffer area.
- Work zones are delineated by channelizing devices or temporary barriers.

The Termination Area is used to return road users to their normal path. Typically an END ROAD WORK sign, a speed limit sign, or other signs are used in this area.

Training Requirements.

It is critical that employers provide all their employees with training on how to work adjacent to motor vehicle traffic in a manner that minimizes their vulnerability and exposure. In addition, workers having specific TTC responsibilities must be trained in TTC techniques, device usage, placement and traffic regulation. There are several MIOSHA Safety Standards that have general training requirements however Construction Safety Standard, Part 22 – Signs, Signals, Tags and Barricades has the most specific requirements for road work.

Rule 2221(2) states:

"An employer shall provide training appropriate to the work assignment for each employee engaged in activities covered by this part. The following are examples of the training that may be required:

(a) Recognition of hazards, such as, but not limited to, possible masonry wall collapse areas, crane swing areas, floor opening covers, or traffic control hazards.
(b) Traffic regulator training.
(c) Proper placement and removal of signs, signals, tags, and barricades.
(d) Training in how to perform work in proximity to traffic to minimize vulnerability."

Worker Safety Apparel.

Traffic regulators have always been required to wear head, eye, and foot protection along with high-visibility reflective vests. Recently the Federal Highway Administration released 23 CFR Part 634 which now requires ***all*** employees who perform work on or in a right-of-way of Federal-aid highways to wear ANSI 107-2004 Class 2 or Class 3 High-Visibility apparel. This new requirement will help protect construction and maintenance crews by making them more visible in the workplace during both daytime and nighttime work. More information is available at www.michigan.gov/mdot.

In conclusion, a well-planned and effective TTC plan, high-visibility safety apparel and effective training will provide for safer work zones for employees, motorists, and pedestrians alike.

For additional assistance, please contact the **Construction Safety and Health Division at 517-322-1856** or the **Consultation Education and Training Division at 517-322-1809.** Construction Safety Standards and other information regarding employee safety and health can be viewed on the MIOSHA website at www.michigan.gov/miosha.