

THE FOLLOWING ARE EXCERPTS FROM OSHA  
COMPLIANCE DIRECTIVE CPL 02-01-054

Dated October 16, 2012



# OSHA INSTRUCTION

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

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**DIRECTIVE NUMBER:** CPL 02-01 -054      **EFFECTIVE DATE:** October 16, 2012

**SUBJECT:** Inspection and Citation Guidance for Roadway and Highway Construction Work Zones

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## ABSTRACT

**Purpose:** This Instruction provides guidance for the safe inspection of work sites where employees engaged in construction work on and near roadways or highways are exposed to struck-by hazards from vehicular traffic.

**Scope:** This Instruction applies OSHA-wide.

**References:** See Paragraph IV.

**Cancellations:** None.

**State Impact:** Notice of Intent and Equivalency required. (See Paragraph VII).

**Action Offices:** National, Regional, and Area Offices.

**Originating Office:** Directorate of Construction.

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For more complete information download the full CPL from the OSHA website  
[www.OSHA.gov](http://www.OSHA.gov)

### Executive Summary

This Instruction is intended to help Compliance Safety and Health Officers (CSHOs) safely inspect roadway and highway construction work zones and to issue consistent citations for violations. Working near fast-moving public traffic presents obvious hazards for CSHOs performing inspections.

This Instruction provides guidance for proper citation under 29 CFR 1926, Subpart G Signs, Signals, and Barricades, which incorporates by reference Part VI of the Federal Highway Administration's Manual of Uniform Traffic Control Devices (MUTCD) 1988 Edition, Revision 3 as well as the Millennium Edition, December 2000. This Instruction also provides general enforcement guidance on issuing citations for § 5(a)(1) General Duty Clause violations.

### Significant Changes

This is the first OSHA instruction on inspection procedures in roadway and highway construction work zones.

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## Purpose.

This Instruction provides general enforcement policy and guidance to assist OSHA compliance personnel in safely inspecting work sites where employees are engaged in construction work on and near roadways or highways (hereinafter “work zones”), and in ensuring consistent enforcement of OSHA requirements. This Instruction covers any construction activity on and near roadways or highways, such as road, highway, sidewalk, or utility construction, where public and/or construction vehicular traffic exposes construction workers to struck-by hazards. This Instruction supplements guidance provided in OSHA Instruction CPL 02-00-150, *Field Operations Manual (FOM)*.

## IX. Background.

Each year, more than 100 construction work zone crewmembers are killed and over 20,000 are injured.<sup>1</sup> According to the Bureau of Labor Statistics (BLS), from 2007-2009, 253 fatal occupational injuries occurred in highway, street, and bridge construction. In 2010, 68 workers died. Moving vehicles that strike workers on foot cause the majority of work zone deaths.<sup>2</sup>

The 2009 American Recovery and Reinvestment Act (ARRA) resulted in an increase in construction work zones. ARRA authorized approximately \$26.6 billion for highway projects. In December 2009, the Federal Highway Administration (FHWA) announced that \$21.8 billion had been obligated to 10,000 projects nationwide – and that 6,092 highway projects were underway.

FHWA’s Manual on Uniform Traffic Control (MUTCD) includes instruction on the design and use of safe temporary traffic control based on adequate warning and channelization of traffic in order to decrease injury and fatality rates of workers in work zones. A fundamental principle of the MUTCD is that drivers reduce their speeds only if they clearly perceive a need to do so. The FHWA has revised the MUTCD a number of times. In 2002, OSHA updated its standards at 29 CFR 1926 Subpart G Signs, Signals, and Barricades to incorporate by reference two more recent editions of the MUTCD. [67 FR 57722]

This Instruction clarifies existing general enforcement policy in work zones using OSHA’s Subpart G – Signs, Signals and Barricades (which incorporates by reference Part VI of the MUTCD, 1988 Edition, Revision 3 or Millennium Edition, December 2000) and Section 5(a)(1) of the Occupational Safety and Health Act of 1970 (OSH Act).

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<sup>1</sup> NIOSH Publication No. 2001-128, *Building Safer Highway Work Zones: Measures to Prevent Worker Injuries From Vehicles and Equipment*, p. iii, available at <http://www.cdc.gov/niosh/docs/2001-128/pdfs/2001-128.pdf>.

<sup>2</sup> Data compiled from Bureau of Labor Statistics searchable database for *Occupational Injuries and Illnesses and Fatal Injuries Profiles*, <http://www.bls.gov/iif/oshcfoi1.htm>. Search limited to worker fatalities in Highway, Street, and Bridge Construction activities.

## CSHO Checklist:

Are traffic controls in place? Appendix C illustrates four component areas in a typical lane closing. Section 6C-2 of the MUTCD provides further details. The CSHO should be mindful that work zones vary; some have no transition area, such as when work takes place on the shoulders or behind barriers.

During the drive-by, the CSHO should determine whether:

- Advance warning signs are in place.
- Transition area tapers are at a safe distance.
- Buffer spaces exist (an optional work zone component). Vehicles or equipment should not occupy buffer spaces (longitudinal or lateral).
- Cones are spaced correctly.
- The control devices indicate a clear path of travel.

For the CSHO's safety, the CSHO should pay particular attention to:

- Dangerous conditions that would require abrupt driving maneuvers.
- The posted speed limit and actual speeds of passing traffic.
- The presence of skid marks, as potential evidence of unclear or confusing traffic controls.

## XII. General Inspection Procedures.

Inspections of roadway and highway construction work zones have two aspects: inspections of the construction work and inspections of the temporary traffic controls.

### A. Inspecting the Construction Work.

Inspections of roadway construction work are generally no different from inspections of other construction sites. This instruction covers any construction work where employees are working near traffic or other roadway conditions. Upon arrival at the activity area of the work zone, the CSHO should perform the inspection as set out in Chapter 3 of the FOM. The CSHO may stop and potentially open an inspection of a roadway or highway construction work zone after observing potential violations from the public way.

The CSHO should pay particular attention, however, to potential violations of the following conditions commonly found at construction work zones:

- Noise (§ 1926.52)
- Dust (Silica) (§ 1926.55)
- Illumination (§ 1926.56)
- Personal Protective Equipment (§§ 1926.95 et seq.)
- Scaffolds (§§ 1926.450 et seq.), particularly during bridge construction

- Fall Protection (§§ 1926.500 et seq.)
- Equipment (§§ 1926.600 et seq.)
- Excavations (§§ 1926.650 et seq.)
- Precast / Poured Concrete (§§ 1926.700 et seq.)
- Steel Erection (§§ 1926.750 et seq.)
- Cranes (§§ 1926.1400 et seq.)

B. Inspecting the Temporary Traffic Controls.

Highway construction work zones require the use of temporary traffic control signs, devices, and procedures. When inspecting these work zones, the CSHO should refer to the specific provisions in Part VI of the MUTCD for more detailed inspection guidance.

The CSHO should refer to the TCP to assist in establishing employer recognition of hazards and the feasibility of abating those hazards, including for § 5(a)(1) violations. For example, TCPs will often identify the location in the work zone where temporary pavement markings should be. Should a hazardous working condition exist due to the employer's failure to use temporary pavement markings, the CSHO may then refer to the TCP as evidence of employer recognition of the hazard and the feasibility of abatement.

XIII. Standards and Citation Policy.

A. Traffic signs - 29 CFR § 1926.200(g)(1)

Section 1926.200(g)(1) (*Traffic signs*) provides: "Construction areas shall be posted with legible traffic signs at points of hazard."

This section establishes a general requirement for employers to post legible traffic signs to warn road users and workers of hazardous conditions that can be present in construction areas. Cite § 1926.200(g)(1) when NO traffic sign warns of a point of hazard *or* when a traffic sign at a point of hazard is illegible.

CSHOs may use provisions of the MUTCD, including non-mandatory provisions, to identify points of hazard in construction areas that the employer, the industry, or where the CSHO's judgment recognizes a dangerous condition.

CSHOs should reference the source, whether the MUTCD or another source, used to identify a point of hazard when citing § 1926.200(g)(1). (See Appendix D for sample citation language).

B. Traffic control signs and devices - 29 CFR § 1926.200(g)(2)

Section 1926.200(g)(2) provides: “All traffic control signs or devices used for protection of construction workers shall conform to Part VI of the Manual of Uniform Traffic Control Devices, 1988 Edition, Revision 3 or Part VI of the Manual on Uniform Traffic Devices, Millennium Edition, which are incorporated by reference....”

This section incorporates two editions of the MUTCD by reference. Employers must comply with one or the other. These are 1988 Edition, Revision 3 and the Millennium Edition.

Cite § 1926.200(g)(2) for violations of *mandatory* (“shall” or “must”) MUTCD

provisions pertaining to signs or devices used for protection of construction workers and reference the *mandatory* provision(s) of the MUTCD.

When OSHA revised § 1926.200(g)(2) in 2002, it stated, “OSHA is amending the safety and health regulations for construction to adopt and incorporate Revision 3

(and the option to comply with the Millennium Edition)” 67 FR 57722-01.

Therefore, by default, cite the 1988 Edition, Revision 3.

*Note: Only cite the Millennium Edition when the employer indicates this is the Edition used at the work zone.*

The most recent edition of the MUTCD is the 2009 Edition. Under OSHA's *de minimis* policy, compliance with more current DOT requirements, or with more current ANSI or other applicable nationally recognized consensus standards, is acceptable so long as such standards are at least as protective as the OSHA requirement.

#### C. Signaling (flagging) - 29 CFR § 1926.201 (a)

Section 1926.201 (a) provides: “Signaling by flaggers and the use of flaggers, including warning garments worn by flaggers, shall conform to Part VI of the Manual on Uniform Traffic Control Devices, (1988 Edition, Revision 3 or the Millennium Edition, which are incorporated by reference in § 1926.200(g)(2).”

Cite § 1926.201 (a) for violations of *mandatory* MUTCD standards pertaining to flagging and reference the *mandatory* provision(s) of the MUTCD.

#### D. Barricades and barriers - 29 CFR § 1926.202

Section 1926.202 provides: “Barricades for protection of employees shall conform to Part VI of the Manual on Uniform Traffic Control Devices, (1988 Edition, Revision 3 or the Millennium Edition), which are incorporated by reference in § 1926.200(g)(2).”

Cite § 1926.202 for violations of *mandatory* MUTCD standards pertaining to the use of barricades and reference the *mandatory* provision(s) of the MUTCD.

Section 1926.203 defines “barricade” as “an obstruction to deter the passage of persons or vehicles.” The Type I, II, and III barricades specified in the MUTCD fall within this definition, as they deter traffic by restricting access to the roadway. In addition, the temporary/portable barrier systems described in the MUTCD are included in the § 1926.203 definition of “barricade,” because these systems can be used as a channelizing and/or physical deterrent of traffic. Therefore, cite violations of *mandatory* MUTCD standards pertaining to either barricades or barriers under § 1926.202.

#### E. Citation Policy.

Where appropriate, follow the procedures for combining and grouping violations as set out in Chapter 4, Section X of the FOM. (See Appendix D for sample citation language).

#### F. Clarification of Standards.

The following clarifications of select provisions of the MUTCD and OSHA standards will assist the CSHO in conducting inspections and issuing citations. Appendix D contains sample citation language to assist the CSHO in drafting citations.

When citing *mandatory* (shall or must) provisions of the MUTCD, this directive lists the section in the 1988 Edition, Revision 3 first, followed by the corresponding section in the Millennium Edition. Note that each edition of the

MUTCD may have different requirements or may use different language to require the same thing. Therefore, when citing § 1926.200(g)(2) and the MUTCD, use the specific language of the edition cited.

##### 1 Advance Warning Area.

The advance warning area is the section of highway used to inform road users about what to expect next. Section 1926.200(g)(1) requires advance warning signs at all points of hazard.

Section 1926.200(g)(2) requires that all signs and devices used to protect construction workers conform to the MUTCD. The MUTCD explains the function, design and application, and spacing requirements and recommendations for advance warning signs and gives examples of signs to place at points of hazard (Section 6F-1b/6F.15).

The following are examples of when the standard requires advance warning:

##### a. Closed Shoulder.

When no advance warning signs are used at points of hazard to indicate a closed shoulder, cite § 1926.200(g)(1). Reference Section 6G-2b(2)/6G.06 of the MUTCD.

When advance warning signs are used for a closed shoulder, but do not conform to the *mandatory* (“shall” or “must”) provisions of the MUTCD, cite § 1926.200(g)(2) and Section 6F1b(2)/6F.15 of the MUTCD.

b. Work on the Traveled Way.

When no advance warning signs are used at points of hazard to indicate work on the traveled way, cite § 1926.200(g)(1). Reference Section 6G-2b(4)/6G.03 of the MUTCD.

When advance warning signs are used for work on the traveled way, but do not conform to the *mandatory* (“shall” or “must”) provisions of the MUTCD, cite § 1926.200(g)(2) and Section 6F1b(2)/6F.15 of the MUTCD.

c. Closed Lanes.

When no advance warning signs are used at points of hazard to indicate work on closed lane(s), cite § 1926.200(g)(1). Reference Section 6F-1 b(2)/6F.21 of the MUTCD.

When advance warning signs are used for work on closed lane(s), but do not conform to the *mandatory* (“shall” or “must”) provisions of the MUTCD, cite § 1926.200(g)(2) and Section 6F1b2/6F.15 of the MUTCD.

2. Transition Area for Mobile Operations.

In mobile operations, the transition area moves with the work space. When no signs, channelization devices, or other appropriate warning devices are used at points of hazard to indicate a transition area during a mobile operation, cite § 1926.200(g)(1). Reference Section 6C-2b/6C.05 of the MUTCD.

When advance warning signs are used during mobile operations, but do not conform to the *mandatory* (“shall” or “must”) provisions of the MUTCD, cite § 1926.200(g)(2) and Section 6F-1 b(2)/6F.15 of the MUTCD.

When channelizing devices are used during mobile operations, but do not conform to the *mandatory* (“shall” or “must”) provisions of the MUTCD, cite § 1926.200(g)(2) and Section 6F-5a/6F.55 (channelizing devices), Section 6F-5b/6F.56 (cones), Section 6F-5c/6F.57 (tubular markers), Section 6F-5d/6F.58 (vertical panels), Section 6F-5e/6F.59 (drums), and/or Section 6F-5h/6F.63 (temporary raised islands). Cite § 1926.202 for improper use of barricades in a transition area for mobile operations.

3. Pedestrian/Worker Safety.

The MUTCD includes several standards that provide for the safety of roadway construction workers who must move around or within the work zone “afoot.”

When signs and devices to protect pedestrians AND workers do not conform to the *mandatory* (“shall” or “must”) provisions of the MUTCD, cite § 1926.200(g)(2) and the relevant Section 6D MUTCD standard.

4. Knowledgeable Persons and Engineering Judgment.

When a qualified/knowledgeable person has not applied the provisions regarding signs and devices (including signaling by flaggers and the use of barricades) used to protect workers after appropriate engineering studies and with sound engineering judgment, cite the appropriate 1926 standard (§ 1926.200(g)(2), 1926.201 (a), or 1926.202) and Section 6D-2/6D.01 of the MUTCD.

5. High-Visibility Clothing.

Cite § 1926.201 (a) and Section 6E-3/6E.02 of the MUTCD when *flaggers* lack the requisite high-visibility clothing. Cite § 1926.651(d) when workers engaged in excavation activities are exposed to traffic. For all other workers exposed to vehicular traffic who are not wearing appropriate high-visibility clothing, § 5(a)(1) of the OSH Act would apply (see, Section 5(a)(1) General Duty Clause Citations, below).

6. Flagger Procedures.

Section 6E-5/6E.04 of the MUTCD sets out the appropriate flagger hand-signaling (flagging) procedures. When used, flaggers must perform these procedures in the prescribed manner. Cite § 1926.201 (a) and Section 6E-5/6E.04 of the MUTCD when signaling by flaggers and the use of flaggers do not conform to the procedures set out in the MUTCD.

A flagger’s improper hand-signaling may be evidence that the employer has failed to instruct the flagger properly in the recognition and avoidance of unsafe work zone conditions. The CSHO should interview employees and the employer to determine if employees received adequate training regarding identified hazards. If training was not provided, the CSHO shall cite the construction training standard, § 1926.21(b)(2), and not § 1926.201(a).

7. Protective vehicles/shadow trucks.

If used, protective vehicles must be located properly in advance of the workers and/or equipment they are protecting. Vehicles should not be able to travel around the protective vehicle and strike the workers and/or equipment. When protective vehicles are used but are not located properly in advance of workers and/or equipment, cite § 1926.200(g)(2) and Section 6F-8a(2)/6F.76 of the MUTCD.

XV. Violations of §1926.20(b)(1) and 1926.21(b)(2).

A. Section 1926.20(b)(1).

“It shall be the responsibility of the employer to initiate and maintain such programs as may be necessary to comply with this part.”

CSHOs should consider citing § 1926.20(b)(1) if the presence of a particular hazard indicates that the employer has not reasonably conformed its safety program to known duties, including measures for detecting and correcting hazards that a reasonable similar employer would adopt.

B. Section 1926.21(b)(2).

“The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his [or her] work environment to control or eliminate any hazards or other exposure to illness or injury.”

CSHOs should consider citing § 1926.21(b)(2) if an employer fails to instruct its employees in the recognition of hazards that reasonable similar employers would know to potentially exist based on work operations.

*Note: The CSHO may cite these standards independently, but they are at times grouped with the citation of a standard that addresses a specific hazard.*

XVI. Section 5(a)(1) General Duty Clause Citations.

The CSHO should follow the guidance in Chapter 4, Section III of the FOM for issuing §5(a)(1) citations and consult with the Regional Solicitor prior to issuance.

The following are examples of conditions where a §5(a)(1) citation may be appropriate:

- **Setting and Retrieving Traffic Cones (Devices)** -- exposes employees to the hazards of being struck by public traffic or construction vehicles and equipment and/or falling from construction vehicles or equipment.
- **Crossing Live Lanes of High-Speed Traffic** -- exposure to the hazard of being struck by public traffic or construction vehicles and equipment.
- **High-Visibility Apparel** -- employees may be exposed to the hazard of being struck by public traffic or construction vehicles and equipment. A citation under § 5(a)(1) of the OSH Act may be issued for struck-by hazards resulting from the failure of employers to ensure that workers (except flaggers<sup>3</sup> and workers engaged in excavation activities<sup>4</sup>) exposed to public and construction traffic wear high-visibility safety apparel. See OSHA’s letter of interpretation #20080829-8611 dated August 5, 2009:

*Whether use of high-visibility warning garments by construction workers in highway work zones is required.<sup>5</sup>*

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3 Flaggers are required to wear high-visibility apparel under § 1926.201(a) and Section 6E-3 of the MUTCD. (See Paragraph XIII.F.5, High-Visibility Clothing, above).

4 Section 1926.651(d) (Subpart P Excavations) states that employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.

5 OSHA letter of interpretation #20080829-8611 is available at

The following are examples of documentation the CSHO should use to establish hazard recognition:

- Instructions and specifications in the operator's manual of a construction vehicle or piece of equipment.
- ANSI/ASSE A10.47-2009, *Work Zone Safety for Highway Construction*.
- ATSSA brochure *Worker Protection: the Installation and Removal of Traffic Control Devices from Moving Vehicles*.
- Obvious hazards that an employer should recognize.
- Hazards addressed in the 2009 Edition of the MUTCD that are not addressed in Part VI of the 1988 Edition, Revision 3 or Part VI of the Millennium Edition.

(Note: If all the elements of a 5(a)(1) violation cannot be documented for the potential hazards present, a Hazard Alert letter shall be issued to the employer  
[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=INTERPRETATIONS&p\\_id=27155](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27155).

## **Appendix A: Glossary of Industry Terms**

### **Acronyms**

ARRA	American Recovery and Reinvestment Act of 2009
ANSI	American National Standards Institute, Inc.
ASSE	American Society of Safety Engineers
ATSSA	American Traffic Safety Services Association
AVD	Alleged Violation Description
CFR	Code of Federal Regulations
CPL	Enforcement and Compliance Directive
CSHO	Compliance Safety and Health Officer
DOT	Federal or State Department of Transportation
FHWA	Federal Highway Administration
FOM	OSHA Instruction CPL 02-00-150, <i>Field Operations Manual</i> , April 22, 2011
ISEA	International Safety Equipment Association
MUTCD	Part VI of the Manual on Uniform Traffic Control Devices, 1988 Edition, Revision 3 or the Millennium Edition
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
OSH Act	Occupational Safety and Health Act of 1970
PPE	Personal Protective Equipment
TCC	OSHA Traffic Control Coordinator
TCP	Traffic Control Plan
TMA	Truck-Mounted Attenuator

## Definitions

These definitions should familiarize CSHOs with common terms used in the MUTCD. Definitions are from The Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition. A comprehensive list of terms used in the MUTCD is located in the 2009 edition.

**Activity Area:** The section of the highway where the work activity takes place. It is comprised of the work space, the traffic space, and the buffer space.

**Advance Warning Area:** The section of highway where road users are informed about the upcoming work zone or incident area.

**Channelizing Devices:** The function of channelizing devices is to warn road users of conditions created by work activities in or near the roadway and to guide road users. Channelizing devices include cones, tubular markers, vertical panels, drums, barricades, and longitudinal channelizing devices.

**Flagger:** A person who actively controls the flow of vehicular into and/or through a temporary traffic control zone using hand-signaling devices or an Automated Flagger Assistance Device (AFAD).

**Freeway:** A divided highway with full control of access.

**Highway:** A general term for denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

**Pedestrian:** A person afoot, in a wheelchair, on skates, or on a skateboard.

**Retroreflectivity:** A property of a surface that allows a large portion of the light coming from a point of source to be returned directly back to a point near its origin.

**Roadway:** The portion of a highway improved, designed, or ordinarily used for vehicular travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder even though such sidewalk, berm, or shoulder is used by persons riding bicycles or other human-powered vehicles. In the event a highway includes two or more separate roadways, the term roadway as used herein shall refer to any such roadway separately, but not to all such roadways collectively.

**Roadway Work Zone (includes "Highway Work Zone" and "Temporary Traffic Control Zone"):** An area of a highway where road user conditions have changed because of a work zone or incident by the use of temporary traffic control devices, flaggers, police, or other authorized personnel.

**Rural Highway:** A type of roadway normally characterized by lower volumes, higher speeds, few

turning conflicts, and less conflict with pedestrians.

**Sidewalk:** That portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved intended for use by pedestrians.

**Sign:** Any traffic control device that is intended to communicate specific information to road users through a word or symbol legend. Signs do not include traffic control signals, pavement markings, delineators, or channelization devices.

**Temporary Traffic Control Zone:** See "Roadway Work Zone," above.

**Termination Area:** The section of the highway where road users are returned to their normal driving path.

**Traffic:** Pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other conveyances singularly or together while using for purposes of travel any highway or private road open to the public.

**Traffic Control Device:** A sign, signal, marking, or other device used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, private road open to public travel, pedestrian facility, or shared-use path by authority of a public agency having jurisdiction, or, in the case of a private road open to public travel, by authority of the private owner or private official having jurisdiction.

**Transition Area:** That section of highway where road users are redirected out of their normal path.

**Traveled Way:** The portion of the roadway for the movement of vehicles, exclusive of the shoulders, berms, sidewalks, and parking lanes.

**Urban Street:** A type of street normally characterized by relatively low speeds, wide ranges of traffic volumes, narrower lanes, frequent intersections and driveways, significant pedestrian traffic, and more businesses and houses.

**Vehicle:** Every device in, upon, or by which any person or property can be transported or drawn upon a highway, except trains and light rail transit operating in exclusive or semi-exclusive alignments. Light rail transit operating in a mixed-use alignment, to which other traffic is not required to yield the right-of-way by law, is a vehicle.

**Warning Sign:** A sign that gives notice to road users of a situation that might not be readily apparent.

## Appendix B: High-Visibility Apparel

Figure 1 . *Daytime Vest-Wear*

### ANSI 107-2004 Class 2 Vest

- Has 201 square inches of retro reflective material
- Current standard issue for most OSHA personnel



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Figure 2 . *Night Vest-Wear*

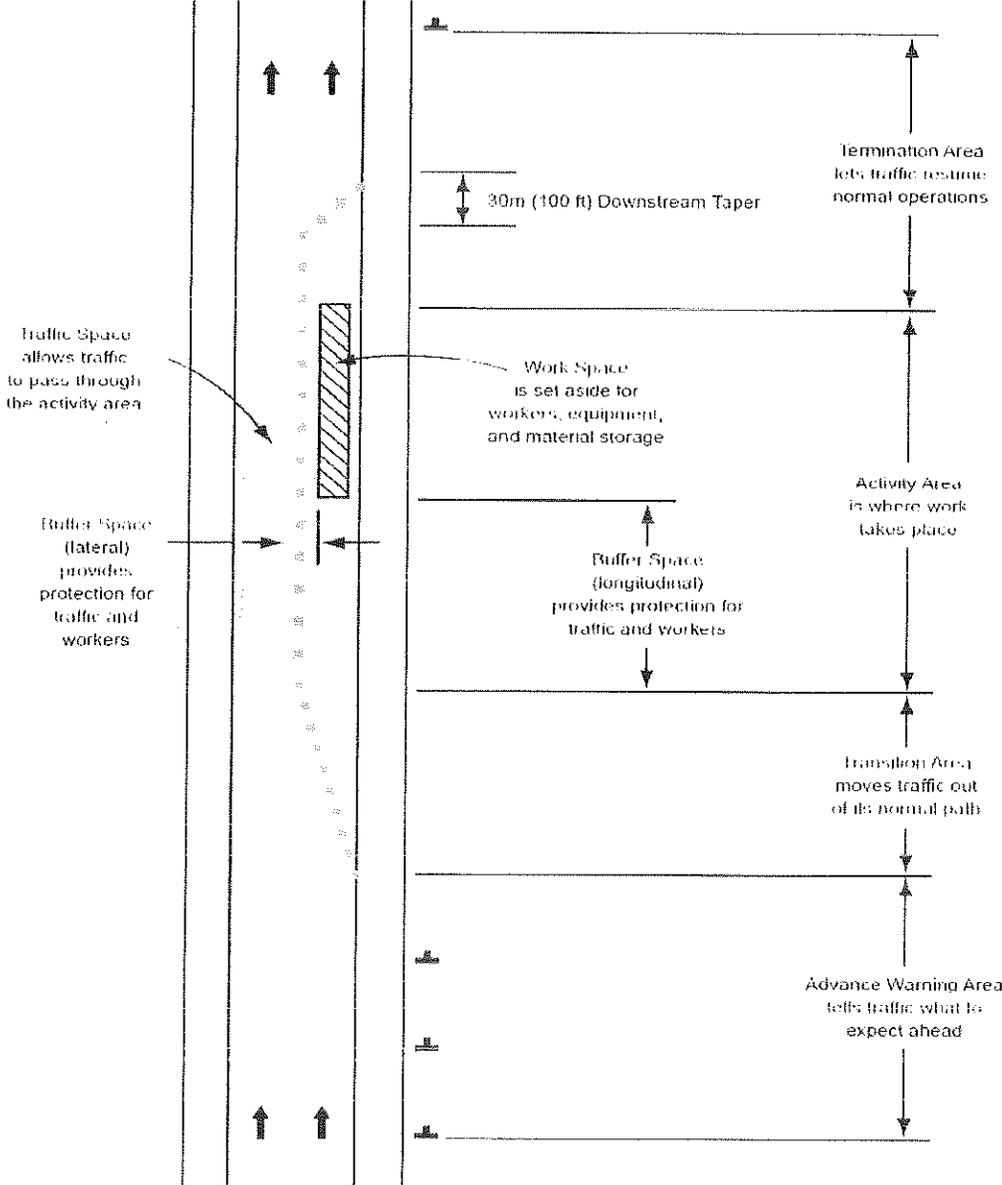
### ANSI 107-2004 Class 3 Vest

- Has 310 square inches of retro reflective material



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**Appendix C: Component Parts of a Roadway Work Zone (Lane Closing)**



**Legend**

→ Direction of travel