



Pennsylvania State Fire Academy

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Minimum Standard for Accreditation (MSA)

Date: April 2002

Last Revision: January 2006

Course Title: Highway Incident Scene Safety and Management

SFA Course Code: HSTC

Course Length: 16 hours

Lecture/Lab Breakdown: 14/2

Prerequisites: Fire Service Personnel - ELIS

Referenced Text(s): *Highway Incident Scene Safety* Instructor Guide by Kilareski and Tarris, P.C., State College, PA, April 2002; revised January 2005; *2003 Edition of the Manual on Uniform Traffic Control Devices, Part 6, Temporary Traffic Control*; Federal Highway Administration, Washington, DC; *PENNDOT Publication 203, Work Zone Traffic Control*

Course Goal: Students completing this course will be able to enhance responder and public safety at motor vehicle accidents and other highway incidents by implementing responder safe work practices and establishing emergency operations work zones that allow for restricted traffic movement options (versus full road closure) to be implemented wherever possible.

Course Description: The primary target audiences for this course are Fire, Fire Police, rescue, EMS and law enforcement personnel who command, respond to or work at highway incidents. Allied professionals such as transportation / highway maintenance and emergency management personnel can also benefit from attendance. Students will learn how to adapt the same safety and traffic control principles used to establish work zones in the highway construction and maintenance industries. They will be shown ways of applying these principles, using limited equipment and staffing, to enhance safety at emergency incidents on streets and highways. Topics covered include scene assessment, risk management, regulatory issues of temporary traffic control, necessary equipment, flagging, and personnel safety procedures. Practical exercises are included that let students apply what they have learned to "real world" incident scenarios.

Description of Methodology: Lecture, discussion, demonstration, and supervised practice.

Student Equipment & Supplies: Pen/pencil & notebook, outdoor clothing suitable to the climate including sturdy work boots and leather (non-fire) work gloves.

(continued)

Minimum Standard For Accreditation

Highway Incident Scene Safety and Management (HSTC)

April 2002; Revised January 2006

Page 2 of 3

Equipment/Audiovisual/Facility/Supply Requirements: Classroom with usual amenities; computer and computer projection equipment with screen; AV CD for the course; below-listed equipment list (**equipment must meet the specifications of the Manual on Uniform Traffic Control Devices**); 1 copy of Participant Manual for each student (manual will remain in student's possession at course conclusion) Paved 2-lane highway (preferably closed to traffic) at least 16 feet wide (not including shoulders) and 1000 feet long, if possible including an intersection area. (any paved area, such as a parking lot, which has at least 1000 feet clear length and on which lanes can be temporarily marked will suffice as a substitute.)

Highway Incident Safe Operating Practices and Traffic Control Signage equipment needed for course:

Description	quantity
1. "Emergency/Accident Ahead" roll-up reflective highway signs 48" x 48"	2
2. " Be Prepared to Stop" roll-up reflective highway signs 48" x 48 "	2
3. "Flagger Ahead" Roll-up-reflective signs 48" x 48 "	2
4. Portable Sign Stands for above	6
5. 18" x 18" orange safety flags for signs	18
6. 24" x 24" orange safety flags w/ 3 ' staffs and stiffeners	2
7. Orange traffic cones, 28 " W/ reflective trim	16
8. 18" or 24" reflective flagger paddles w/ 7' long handles	2

Special Notes & Conditions: Maximum enrollment is 30 students. For any class over 15 students, a second instructor is required for the last 8 hours of class. All course material is © Kilareski & Tarris, PC and may not be duplicated without permission. Course materials are available through the State Fire Academy. Minimum age is 16 due to the Child Labor Law restrictions on 14 and 15 year olds re: work on roads open to public travel.

Course Outline

Elapsed Time/Total Time

:30/:30

1:00/1:30

1:00/2:30

1:30/4:00

1:00/5:00

1:30/6:30

1:30/8:00

4:00/12:00

4:00/16:00

Topic

Chapter 1: Background

Chapter 2: Guidelines and Standards

Chapter 3: Highway Safety Principles

Chapter 4: First Hour Phases

Chapter 5: Traffic Control Devices

Chapter 6: Flagging

Chapter 7: Traffic Control Zones

Chapter 8: Class exercises; classroom

Chapter 8: Class exercises; outside

(continued)

Minimum Standard for Accreditation

Highway Incident Scene Safety and Management (HSTC)

April 2002; Revised January 2006

Page 3 of 3

Competency Evaluation Mechanism: Student performance on Chapter 8 exercises

Learning Outcomes (Behavioral Objectives): Upon completion of this course, the student shall:

1. Correctly identify three guiding principles in highway incident responder scene safety.
2. Correctly describe the impact on traffic movement caused by a highway incident and how the consequences of that impact can negatively affect public and responder safety.
3. Correctly explain why full road closure is not always the best option for preserving or enhancing public and responder safety.
4. Correctly explain the importance of coordinated command and control activities at highway incidents.
5. Identify and define common terms associated with work zone establishment.
6. Identify the MUTCD-compliant clothing available to enhance personnel visibility when working at highway incidents and why it should be used by all personnel.
7. Given the highway, traffic, available resources, and highway incident response history of his/her organization, conduct a hazard analysis of the highway incident response environment in that jurisdiction.
8. Given the results of the hazard analysis conducted and the information contained in this course, devise a workable and safe Standard Operating Guideline (SOG) regarding highway incident safety and work zone establishment for his/her jurisdiction.
9. Given a highway incident scenario, conduct a scene safety assessment and devise a scene safety plan.
10. Describe the factors to be considered in making a determination of what constitutes an “acceptable level of risk” for responders at a highway incident.
11. Identify at least two ways that apparatus visibility may be improved by equipment and markings.
12. Given a highway incident scenario and the equipment inventory described in the course material, demonstrate the ability to operate/use the equipment to set up an incident work zone meeting the intent and spirit of PENNDOT Publication 203 and the Federal MUTCD.
13. Given a highway incident scenario requiring the use of flaggers and the proper flagging and safety equipment, safely and effectively perform the duties of a flagger as described in PENNDOT Publication 203 and PENNDOT Publication 234 (*Flagger’s Handbook*).
14. Identify the MUTCD specifications for every traffic control device included in the course material; Identify any limitations (day vs. night, etc.) imposed by the MUTCD on any of these devices.
15. Given a highway incident scenario and a list of responding vehicles/apparatus, correctly identify safe and effective placement for the vehicles/apparatus based on the scenario and the use to which the vehicle and its equipment will be used.
16. Define the term *shadow vehicle*; given a highway incident scenario and a list of responding vehicles/apparatus, select a vehicle of sufficient size and GVWR and correctly identify the procedures for locating, parking and using a shadow vehicle.
17. Given a highway incident scenario, describe the safety considerations and procedures necessary when reestablishing traffic flow.

Questions/Comments: Contact the Curriculum Specialist
