



# RESPONDERSAFETY

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## Overview & Purpose:

Review the use of high visibility apparel and emergency lighting during roadway incident responses

## Topics:

- High visibility apparel
- Emergency lighting

## Pre-Class Assignment:

Complete the following modules on [learning.respondersafety.com](http://learning.respondersafety.com). Bring certificates to class.

- Manual on Uniform Traffic Control Devices
- High Visibility Innovations
- Safe Fire Service Traffic Control Practices
- See and Be Seen: Emergency Lighting Awareness

If your agency is law enforcement, also complete the “Law Enforcement and High Visibility PPE” on [learning.respondersafety.com](http://learning.respondersafety.com)

Read our department’s personal protective equipment and emergency lighting SOPs (see Appendix B for model SOP)

## Materials:

- Department SOP handouts
- Copy of NFPA 1091
- ANSI-compliant high visibility apparel for all personnel
- Typical response vehicle(s) with emergency lighting packages
- Sufficient space to demonstrate lighting packages

## Learning Objectives:

- Understand department SOPs on wearing high visibility apparel and operating emergency lighting
- Explain purpose and advantages of wearing high visibility apparel
- Explain purpose and advantages of deploying emergency lighting
- Properly don and doff high visibility apparel
- Properly deploy emergency lighting on typical department vehicles



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## NFPA 1091 JPRs:

- 4.2.1 Conduct an initial size-up and establish command of a traffic incident
- 4.2.3 Establish a TIMA at a traffic incident
- 4.2.4 Establish advance warning for the traffic incident

## Correlations to Dept Training Rotations:

To be filled in by Instructor

## Related SOPs/SOGs:

Titles to be filled in by Instructor

## Introduction (10 min):

Introduce high visibility apparel and emergency lighting:

- Show the TIM in a Minute video.
- Relate to 1091 JPRs and departmental training requirements and explain how this training will help fulfill those.
- Discuss a struck by or near miss case related to high visibility apparel and/or emergency lighting, local if possible. See Appendix A for suggested cases.

## SOP Review (10 min):

- Distribute a copy of the department's high visibility apparel and emergency lighting SOPs. Review them with the group. Discuss and answer questions about the expectations set by the SOPs.
- Review Chapter 6 of the MUTCD, which sets the high visibility apparel requirements for responders working at roadway incidents.
- Review state OSHA requirements for wearing of high visibility apparel if applicable.
- Review the NFPA 1500 requirement for wearing high visibility apparel (section 9.4.9).
- High visibility apparel should be ANSI-compliant. Turnout gear should be NFPA-compliant.



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## Discussion (10 min):

Discuss with the group:

- How high visibility apparel improves responder visibility in all conditions
- High visibility garments should be stored, maintained and cleaned according to manufacturer's instructions and be replaced when they no longer provide florescent or reflective features.
- Who is responsible for deploying emergency lighting at the department's roadway responses

## Exercise 1 (10 min):

Distribute (or have personnel bring) ANSI-compliant high visibility apparel. This should at least include high visibility vests. Remind personnel that turnout gear only fulfills the requirement if the responders is subject to fire, flame, heat, or hazardous materials at the incident. If this is not the case, an ANSI-compliant vest or other high visibility garment must be worn. Check the fit of all apparel on all personnel and ensure it does not interfere with typical duties at a roadway response.

If personnel are not all currently issued high visibility apparel, the training session can be an opportunity to fit all personnel for an equipment order. Have a selection of vests on hand for fitting, then record sizing information for the order.

Review with personnel where high visibility apparel is stored in each type of response vehicle the department uses. Review that high visibility apparel should be donned prior to exiting the vehicle and should not be removed until back in the vehicle and returning to service.

## Exercise 2 (15 min):

Have each type of response vehicle used by the department available to the group, such as in the bay, garage, or department parking lot. Demonstrate the emergency lighting package capabilities on each vehicle and give each person the opportunity to operate the package. Discuss how the settings on the package are used in different ambient conditions (e.g., day, night rain). Remind personnel that forward-facing white lights are to be extinguished or pointed down toward the work area to keep them from shining in the eyes of oncoming drivers.

## Wrap Up: (5 min):

Discuss situations where emergency lighting may need to be adjusted, such as road features like limited sight distance, changes in weather, or partial clearance of an incident and how to adjust accordingly.



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## Resources:

Additional resources available at:

[https://learning.respondersafety.com/Training\\_Programs/High\\_Visibility\\_Innovations.aspx](https://learning.respondersafety.com/Training_Programs/High_Visibility_Innovations.aspx)

[https://learning.respondersafety.com/Training\\_Programs/Manual\\_on\\_Uniform\\_Traffic\\_Control\\_Devices\\_MUTCD.aspx](https://learning.respondersafety.com/Training_Programs/Manual_on_Uniform_Traffic_Control_Devices_MUTCD.aspx)

[https://learning.respondersafety.com/Training\\_Programs/Safe\\_Fire\\_Service\\_Traffic\\_Control\\_Practices.aspx](https://learning.respondersafety.com/Training_Programs/Safe_Fire_Service_Traffic_Control_Practices.aspx)

[https://learning.respondersafety.com/Training\\_Programs/See\\_and\\_Be\\_Seen\\_Emergency\\_Lighting\\_Awareness.aspx](https://learning.respondersafety.com/Training_Programs/See_and_Be_Seen_Emergency_Lighting_Awareness.aspx)

[https://learning.respondersafety.com/Training\\_Programs/Law\\_Enforcement\\_and\\_High\\_Visibility\\_PPE.aspx](https://learning.respondersafety.com/Training_Programs/Law_Enforcement_and_High_Visibility_PPE.aspx)

[http://www.respondersafety.com/Resources/Advance\\_Warning.aspx](http://www.respondersafety.com/Resources/Advance_Warning.aspx)

[http://www.respondersafety.com/Resources/High\\_Visibility\\_PPE.aspx](http://www.respondersafety.com/Resources/High_Visibility_PPE.aspx)

[http://www.respondersafety.com/Resources/High\\_Visibility\\_Vehicle\\_Markings.aspx](http://www.respondersafety.com/Resources/High_Visibility_Vehicle_Markings.aspx)

MUTCD: <http://www.respondersafety.com/Download.aspx?DownloadId=a7e9df5b-2b24-4c9b-8cee-4caee32346a9>

<http://www.respondersafety.com/Videos/Marked-And-Seen.aspx>

<http://www.respondersafety.com/Videos/Accepting-The-Challenge-To-Be-Visible.aspx>

<http://www.respondersafety.com/Videos/Be-Right-Be-Bright.aspx>



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## Appendix A: Suggested Case Studies

Volunteer Fire Fighter Struck and Killed by Backing Fire Apparatus at Rural Brush and Structure Fire – Illinois <https://www.cdc.gov/niosh/fire/reports/face201231.html>

Volunteer Fire Fighter Dies When Struck By a Bus While Working Along an Interstate Highway – Illinois <https://www.cdc.gov/niosh/fire/reports/face200726.html>

Volunteer Fire Chief Struck and Killed on Interstate Highway While Directing Traffic – Pennsylvania <https://www.cdc.gov/niosh/fire/pdfs/face201312.pdf>

Volunteer Fire Fighter Struck and Killed by Tanker Backing into the Bay of the Fire Station—Pennsylvania <https://www.cdc.gov/niosh/fire/pdfs/face201616.pdf>

Career Fire Captain Dies When Struck by a Pickup Truck While Working at the Scene of Two Traffic Incidents - California <https://www.cdc.gov/niosh/fire/reports/face201207.html>

Volunteer Fire Fighter Dies After Falling From Tailboard of Tanker Truck—West Virginia <https://www.cdc.gov/niosh/fire/reports/face201206.html>

One Career Fire Fighter Killed, Another Seriously Injured When Struck By a Vehicle While Working at a Grass Fire Along an Interstate Highway – South Carolina <https://www.cdc.gov/niosh/fire/reports/face201036.html>



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## Appendix B: Model SOP for High Visibility Apparel

\_\_\_\_\_X\_\_\_\_\_ FIRE DEPARTMENT

### STANDARD OPERATING PROCEDURE

#### Safety Apparel While Working In or Near Moving Traffic

PROCEDURE # XXX.XX

EFFECTIVE DATE:

#### PURPOSE

The purpose of this Policy is to describe the required personal protective apparel to be worn by \_\_\_\_\_ Fire Department members when working at an incident that places the member in or near moving traffic. Incidents such as vehicle collisions/injury crashes, extrications, fluid spills, dangerous conditions, and vehicle fires are typical situations where this policy is applicable.

#### BACKGROUND

For incidents where exposure to the hazards of moving traffic are present for fire department personnel working on foot, this department policy can be summarized in the statement. "If your feet are on the street, your vest is on your chest." Conforming to this policy places the member in compliance with the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD).

#### PROCEDURE

Specifically, when the nature of the incident requires the member to work in or near moving traffic, the following personal protective apparel shall be worn:

- Structural fire helmet with chin strap properly donned
- NFPA compliant turnout gear for firefighting or rescue operations
- ANSI 107-compliant Type R or Type P Class II or Class III garment
- Protective footwear

If a member prefers to wear a structural turnout coat due to inclement weather; i.e. rain, cold, etc, or is required to wear structural turnout gear due to duties assigned at the incident scene, the ANSI compliant safety vest must be donned over the turnout coat. Turnout coats are not acceptable as high-visibility highway safety apparel when donned without the ANSI-compliant vest on the outside of the coat, unless personnel are exposed to fire, flame, heat or hazardous materials.

Structural bunker pants and boots may be worn in lieu of standard protective footwear.



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## NON-VEST INCIDENTS

Several unique incident types may be encountered where the donning of a highway safety vest may actually increase risk of injury for the fire department member or where wearing of a vest may in fact be otherwise impractical. Under these limited situations, the requirement for donning ANSI-compliant vests by members directly involved in hazard area "Hot Zone" activities is modified.

The exemptions for wearing a highway safety vest applies only to members directly involved in activities within an established "Hot Zone" and only when the "Hot Zone" is protected from the hazards of moving traffic by apparatus blocking, lane closures, etc.

The required ANSI-compliant Highway Safety vest need not be worn when a member is required to:

1. Don structural PPE and/or SCBA to work in close proximity to a source of heat, flame, or fire such as during suppression of a vehicle fire
2. Don hazardous material personal protective equipment to avoid potential exposure to chemicals or other contaminants, or
3. Don technical rescue PPE and/or equipment for a technical rescue incident such as extrication, high or low-angle rope rescue, swift water rescue, etc.

All members on-scene performing duties or involved with activities other than those listed above are required to don ANSI-compliant garments when working in or near moving traffic.

Members directly involved in source of heat, chemical, or technical rescue activities as listed above who complete their activities within the designated Hot Zone are required to don ANSI-compliant vests once their activities within the Hot Zone are completed or they leave the immediate "Hot Zone" area of the incident scene.