

# **Module 1: Crash Prevention**

## **Lesson 4: Traffic Congestion**

### **Crash Case Study: I-64 Near Charlottesville, Virginia**

#### **Summary of Crash Event**

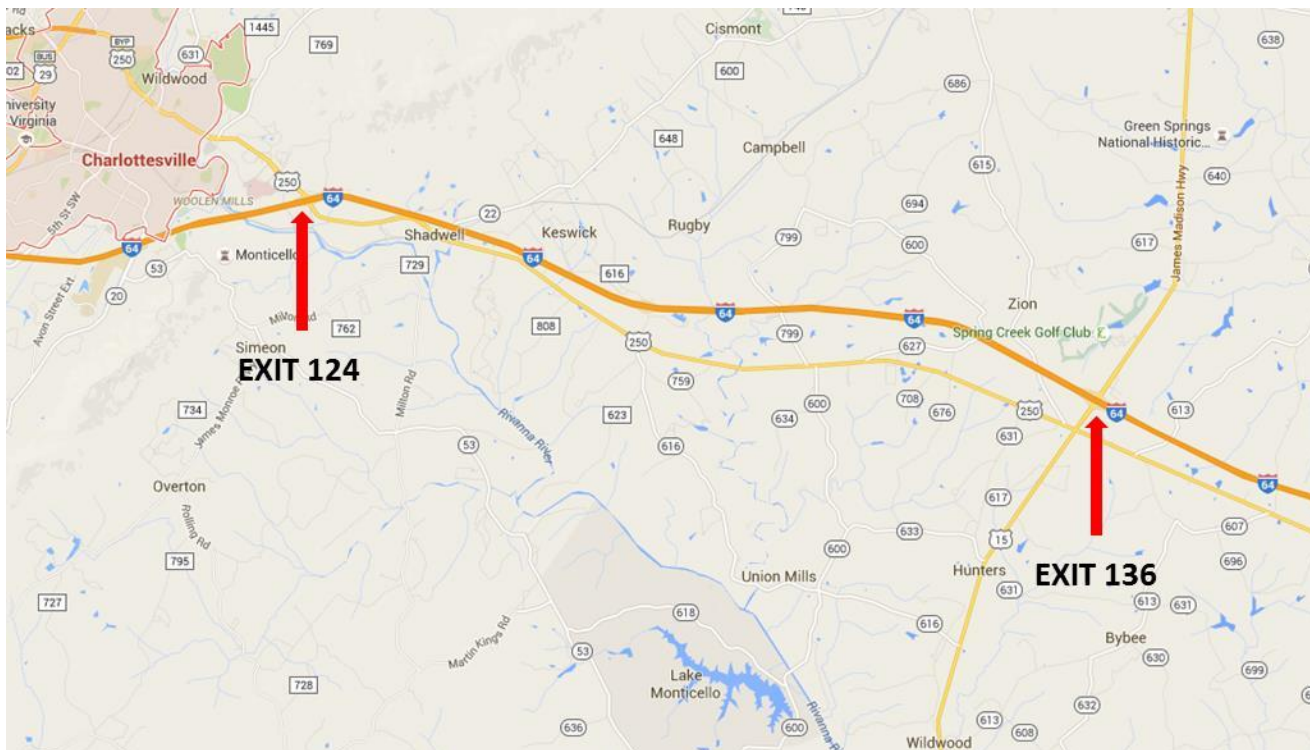
A multi-vehicle traffic accident occurred on Thursday 13 November 2014 on Interstate I-64 east of Charlottesville, VA. The accident involved a car, a fire truck responding to the accident in rush hour traffic, and a tractor trailer carrying several hazardous materials. Westbound lanes were closed for a brief time, and both eastbound lanes were closed for an extended period of time. Lane closure caused traffic delays eastbound for many hours. For additional details, see the following news story.

#### **Link to News Story**

<http://www.newsplex.com/home/headlines/Significant-Accident-on-I-64-Scrambles-Multi-County-Emergency-Response-282550481.html>

#### **Map of the Surrounding Area**

The accident occurred between Keswick shown west of Exit 124 on the map below and Exit 136 also shown. The coordinates of Exit 124 are 38.020549, -78.430300, and the coordinates of Exit 136 are 37.977059, -78.213921.



## Analysis questions

1. Did this crash cause congestion?
2. Use Google Maps to determine the closest emergency response unit. Estimate how long it would have taken for EMS to arrive. How does this affect congestion and injury outcome? Are there alternative routes that the EMS could take to improve travel time if the roads are congested?
3. Did the transportation authority use any special traffic management strategies or technologies to help manage traffic during this incident?
4. What changes would you make in order to reduce the amount of congestion during this incident? Be specific. What strategies and technologies would you use?
  - a. How would you alert drivers of the growing congestion?
  - b. What technologies could you use to warn or divert traffic?
  - c. If re-routing traffic, how could traffic be re-routed in order to reduce the congestion caused by the crash? And what implications would this have on the surrounding roads? Can these roads handle the volume of traffic that you have diverted? Will there be additional delays caused by re-routing? Will this new method provide a shorter travel time compared to simply staying on the main road?

## Task

Prepare a PowerPoint presentation to explain your findings and solution to the class. Be sure to include a quick explanation of the crash scenario, the strategies that were employed on the scene, and the strategies that you would recommend implementing to reduce congestion and improve traffic flow.