

Module 1: Crash Prevention

Lesson 4: Traffic Congestion

Crash Case Study: I-77 near Fancy Gap, Virginia

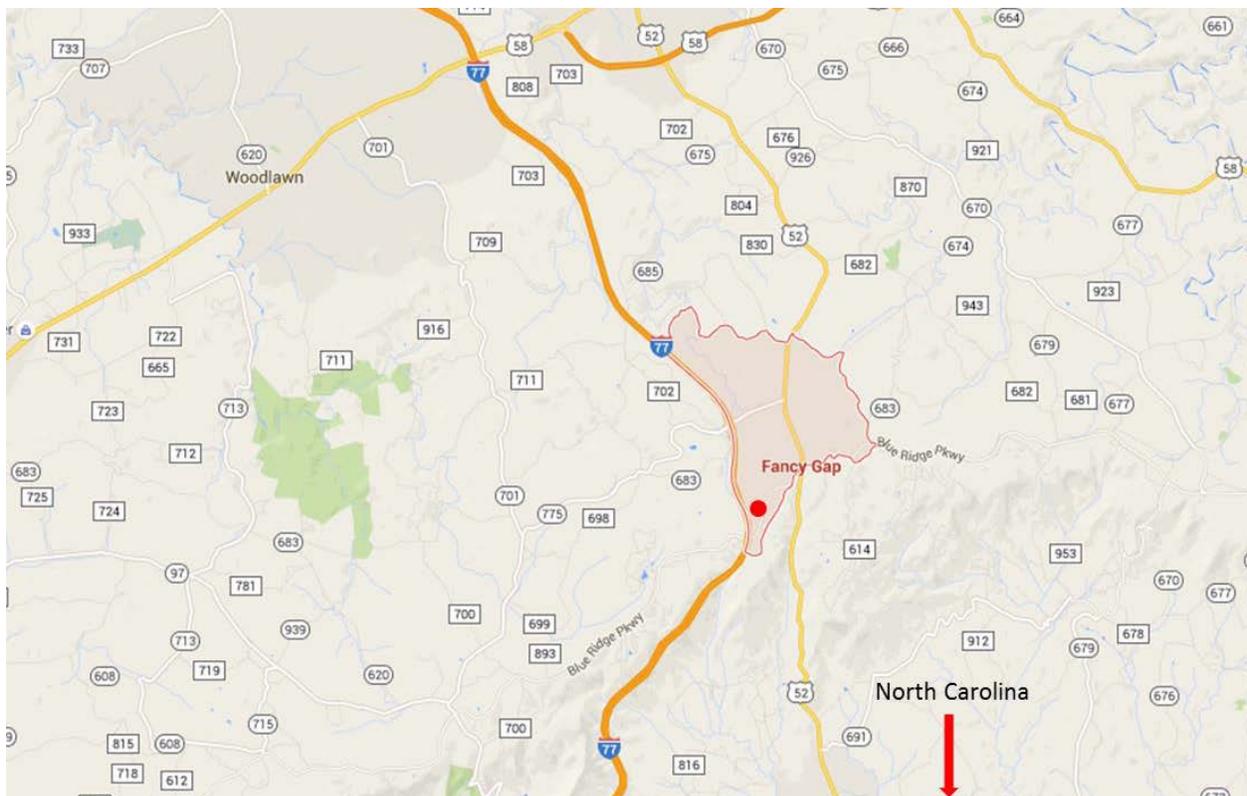
Summary of Crash Event

Interstate 77 near Fancy Gap, Virginia runs north and south bound on the Virginia/North Carolina border. It travels through the rural and mountainous area of Carroll County in southwest Virginia and is known for frequent fog due to rapid elevation change along the escarpment of the Blue Ridge Mountains. This case study occurred about 1:15pm on Easter Sunday, March 31, 2013 in the Fancy Gap area. A 95 car pile-up occurred along an approximate 1-mile stretch during extreme foggy conditions with visibility near zero. Three people were killed and 25 others injured. Traffic was backed up about 8 miles in the southbound lanes, and the northbound lanes were closed to allow emergency vehicles access to the multiple pile-ups. The highway was not reopened until early Monday morning.

Links to News Story

- <http://www.cbsnews.com/news/95-car-wreck-leaves-3-dead-at-va-nc-line/>
- <http://myfox8.com/2013/03/31/multi-vehicle-accident-reported-in-carroll-county-va/>

Map of the Surrounding Area



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.