



CLM 2014 Transportation Mini Conference

July 11, 2014 in Chicago, IL

What the Driver Sees, or Doesn't See, at Night

I. Understanding the allegation of “over driving the headlights”

Explanation of “over driving the headlights”

This argument is that a driver at night was going too fast because he could not stop his truck in time to avoid an object that became visible in his headlights. It is a powerful argument because it applies even though the driver may be going less than the speed limit. For example, suppose a driver is cruising on the interstate at 55mph, which is 81 feet per second (fps), with his low-beam headlights providing the only illumination on the roadway. Suppose also the low-beams project 250 feet in front of the tractor. State CDL manuals generally state an alert driver has a perception-reaction time of 2.5 seconds. During the 2.5 seconds it takes the driver to perceive and react to the situation, his tractor-trailer will have traveled 203 feet. Actually stopping the tractor-trailer will require another 200 feet, assuming good brakes on dry pavement. Under this scenario, where our tractor is moving at 55 mph and the low beams provide the only illumination, our driver cannot avoid an object that first becomes visible in his headlights. In spite of our driver consciously driving at a reduced rate of speed, he has violated a fundamental and common sense rule: do not drive too fast for conditions. Now suppose that, instead of driving with his low beams, our driver had his high beams activated as recommended in the CDL manual. § 2.6.4, *Speed and Distance Ahead*. These beams project 450 feet in front of the tractor-trailer, thereby providing him sufficient distance to stop before striking the object.

Legal basis for plaintiff's argument

We are all aware of the myriad of regulations governing the trucking industry. You will not find a regulation instructing drivers to use their high beams at 55 mph. What you will find are general statements forbidding drivers from traveling too fast for conditions. *E.g.*, FMCSR § 392.14, *Hazardous conditions; extreme caution* (“Extreme caution in the operation of a commercial motor vehicle shall be exercised when hazardous conditions, such as those caused by snow, ice, sleet, fog, mist, rain, dust, or smoke, adversely affect visibility or traction. Speed shall be reduced when such conditions exist.”). It is these general, common-sense rules that provide Plaintiff's counsel the basis for affixing negligence to your driver's actions.

Presentation of factual scenario

The following is a real-world scenario presently in litigation. A black SUV has overturned on the interstate in Alabama. Its four occupants are in the process of getting out of the vehicle. Our driver is approaching the SUV at 65mph with his high-beams on. As he nears the SUV, he sees a light that causes him to take his foot off of the accelerator. The SUV is located on a slight grade, and the tractor-trailer slows to 45mph when the SUV becomes visible.

II. Understanding the relevant human factors variables

Factors affecting nighttime visibility

Many factors affect nighttime visibility, including your driver's eyesight, the ambient lighting in the cab, outside lighting (e.g., street lights, moonlight, etc.), and the design/location of the vehicle's headlights. Equally important is the object at issue. Does it give off its own illumination (e.g., roadway flare)? If it does not, headlights will only make it visible where there is a stark contrast between the object and its surroundings. This contrast might be created because the object's luminance (the amount of light it reflects back to a light source) is higher than luminance of its surroundings. For example, a highway worker wearing a reflective vest has a higher luminance than a pedestrian in a dark sweatshirt and jeans. This contrast might be created because the object is much closer than the perceived background. For example, there is greater contrast with a person standing up on road and the horizon behind them than there is with the same person lying on the ground.

Perception-reaction time

As used in human factors applications, *perception* is a combination of observing and understanding. *Reaction* is a combination of deciding to act and acting. The sum total of the time it takes to complete these four steps is perception-reaction time. Discussions of perception-reaction time often center on “accepted values” for certain scenarios (e.g., a daytime perception-reaction time of 1.5 seconds, a nighttime perception-reaction time of 2.5 seconds). The reality is perception-reaction times are always unique to a given situation and depend on many variables.

Application to the factual scenario

Our driver is at a major disadvantage because he is rapidly approaching a black object on an incline. The SUV's lights are off so it is giving off no illumination. And because it is on an incline, it has little contrast from its background. Given these facts, our driver's perception-reaction time will be higher than normal, making it more difficult for him to avoid the SUV.

III. Risk Management

Driver training

Scenarios encountered in the real world

IV. Defending the claim

How plaintiff will present their claim

The Plaintiff is going to present all of the factors in as favorable a light as possible to make our driver look bad. Plaintiff will introduce expert testimony to argue low perception-reaction times and high visibility with the implication being a reasonable person would have avoided the accident.

Investigation you must conduct to support your defense

To defend the claim, you must know the visibility at the scene, including the ambient lighting in your driver's cab, your driver's site picture of the roadway, all outside light sources, and the luminance of the object. Many times a nighttime visibility test is needed to determine the distance at which the driver could determine the threat of the black SUV on the road.

Foundation for expert testimony

It is important to investigate the qualifications of Plaintiff's expert to ensure they are competent to offer testimony on human factors. Many times Plaintiffs will seek to introduce human factors opinions through engineers who are specialists in accident reconstruction. Though courts may allow such experts to offer basic opinions such as "standard" perception-reaction times for simple scenarios, courts should be receptive to motions to preclude any opinions dealing with complex variables that require a true human factors expert. *E.g., Castaldi v. Land Rover N. Am., Inc.*, No. 06-CV-1008, 2007 WL 4165283,*7 (E.D.N.Y. Nov. 21, 2007); *Benoit v. Westport Ins. Corp.*, No. 07-1109, 2009 WL 2970429, (W.D. La. Aug. 21, 2009).

Application to the factual scenario

In our real-world case, our driver actually managed to avoid the overturned SUV and its four occupants, who were wondering on the roadway near the SUV. He avoided an accident by steering onto the emergency lane and off onto the shoulder, nearly wrecking in the process. The issue in the case has become whether he struck one of the occupants as he passed the overturned SUV. We are defending the case by arguing the driver was faced with a sudden emergency. Our human factors expert will testify a number of factors – the darkness, the incline, the absence of lighting on the SUV, etc. – combined to create a situation where no reasonable driver would have become aware of the SUV until they were almost on top of it. The best factual evidence to support this argument? A witness has testified he was able to avoid the SUV only because an approaching vehicle warned him of its presence, and the driver of a small sedan actually struck the SUV after our driver had passed it.