

Bicyclists and Truck Driver Visibility

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On August 7th, 2014 a 19-year-old female cyclist was killed when her bicycle was run over by a concrete mixer truck at the intersection of Riverside Drive and Wharncliffe Road in London, Ontario. Photos of the crushed bicycle and the rider's helmet showed that the cycle was located at a point where the truck would have been making a right turn from Riverside onto Wharncliffe and that the cyclist was within the curve of the curb between those roads. This is a common tragedy that is not discussed or well known.

Most drivers and bicyclists are unaware of the great difficulty of a truck driver to see objects located near their right front fender and wheel. As an example, the two photos below show a set-up where a Buick Allure has been parked next to the right front wheel of a tractor trailer.



Figure 1: View of a Buick Allure stopped next to the right front wheel of a tractor trailer.



Figure 2: View showing close proximity of the left side of the Buick next to the right front wheel of the truck.

What we do not appreciate is what the driver of such a large truck is able to see when something is located at this position. Figure 3 shows the view from the truck driver's seated position and looking toward the right through the windshield and right window.



Figure 3 View toward the right-front from the seated position of a truck driver

Importantly, the right mirrors of the truck in Figure 3 do not show the presence of the Buick. Yet, if we stand over the right front seat of the truck's cab the Buick is partially visible, as shown in Figure 4.



Figure 4: View showing the Buick while the photographer is standing over the right front seat in the cab of the truck.

This is why it is so dangerous for drivers of passenger cars to drive near the right-front fender or wheel of a large truck. One can imagine the greater difficulty when the object is smaller such as a bicycle or a pedestrian.

While travelling along highways the problem with bicycles is that not all cyclists follow a steady, straight line, particularly those who are inexperienced or not fully in control of their cycle. It is also true because certain road irregularities will cause bicyclists to steer around them and out into the path of oncoming traffic approaching from the rear. Bicyclists also have difficulty seeing what is behind them because many bicycles do not have mirrors and the mirrors that exist are often inadequate. Note that a mirror is often mounted to a handlebar yet frequently the position of a handlebar on a bicycle is rotated to the left or right as the cyclist travels an imperfect line. Thus a bicycle mirror is often not as functional as a rearview mirror in car.

Large trucks often have widths that are about 2.6 metres. The typical width of a passenger might be in the range of 1.8 metres. A typical, highway lane might be about 3.5 metres wide, yet many low-volume rural roads and city streets might have lanes approaching a width of only 3 metres. This does not leave much room to share when a truck and bicycle must share the lane.



Figure 5: View of a bicyclist being approached from the rear by a concrete mixer truck on an urban arterial roadway in London, Ontario.

Despite the existence of laws that force bicyclists off sidewalks and onto busy roads, we at Gorski Consulting advise that a sensible approach is to consider the situation presented by each road being travelled and, when it appears unsafe for a bicyclist to share a lane with large trucks, the cyclist should choose to ride on a sidewalk until conditions improve.

This advisement is not a panacea that solves every problem. There will be those instances where cyclists riding on a sidewalk will endanger the safety of some vulnerable pedestrians. This is true of the elderly or young children. In these instances the bicyclists' actions must be similar to a defensive driver. When approaching vulnerable pedestrians cyclists may have to slow down or even stop before passing such persons.



Figure 6: Each roadway situation should be examined by a bicyclist to minimize the possibility of a tragic encounter, such that riding on a sidewalk may sometimes be required if riding on the road appears to be hazardous.



Figure 7: View of a cycling club choosing to ride on a sidewalk to avoid large and wide vehicles.



Figure 8: View of a cyclist riding on a sidewalk and approaching a vulnerable, elderly pedestrian from the rear.



Figure 9: Baggage carried in the hand of a cyclist can cause a difficulty in controlling the cycle while also potentially striking a vulnerable pedestrian.

Overall, there is a lack of education about the visibility of bicyclists but particularly in truck drivers' ability to see them when bicycles are located near the truck's right front area. This is a particular problem when trucks make right turns. This is a common source of fatal consequences to bicyclists and pedestrians.

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