Gorski Consulting Website

Archived News - 2014 - July

July 28, 2014

Tragic Child Fatality At London Costco Parking Lot

On July 25, 2014, a red Chevrolet Monte Carlo was observed reversing through the front doors of the busy Costco retail store in London, Ontario. The result was that a number of shoppers were struck, including a mother and her two children. One of those children, six-year-old Addison Hall later died of her injuries, while her younger sibling reportedly remains in critical condition. Little has been revealed about how this tragedy unfolded, and more importantly, why.

Although police cordoned off the area to complete their investigation, the parking lot remained closed to any visitors by store security until the store reopened on the morning of July 26th. Thus, the most critical evidence, which would have existed on the parking lot as the Monte Carlo commenced its reversing motion, was likely lost to any other observers except police and store officials.

Throughout the day of July 25, 2014 no one was allowed near the parking lot of the Costco store. In this photo taken on the accident date the red Monte Carlo remains wedged in the front door area of the store.

Incidents of sudden acceleration are naturally contentious in that they could result in large monetary losses to persons other than the driver involved if that acceleration was determined to be the fault of a vehicle malfunction or something related to the store's premises. Thus we often observe the secrecy that envolves such that independent persons such as ourselves could not examine the critical evidence until a substantial part of it might have been destroyed. When the Costco store reopened on July 26 we examined what evidence was still remaining.

The photo below shows a general view looking along the parking lot and towards the front doors of the Costco building. Given the angle at which the vehicle came to rest it is likely that the Monte Carlo originated somewhere from the parking lot along the path shown in the photo below.

The angle at which the Monte Carlo entered the front doors would suggest that its original location was somewhere along the path shown in the above photo.

The yellow hatched lines on the parking lot is approximately where the Monte Carlo passed between two red pillars and toward the store's front doors.

In conducting our delayed examinations we focused on the area of the parking lot extending from the rest position of the Monte Carlo and in line with the red pillars which narrowed the path taken by the vehicle. As indicated in the photo below no

obvious, unusual evidence was found on the parking lot surface leading to the yellow painted area in front of the noted red pillars.

An important part of the investigation would conduct detailed examination of the parking lot surface leading up to the red pillars for any unusual evidence that could be related to the incident. At the time that this photo was taken on the morning of July 26th, there was no obvious, unusual evidence on the parking lot surface leading to the red pillars in the background.

One might speculate why the yellow rectangle of yellow paint existed. A possible likelihood is that delivery vehicles need an access point to the store's front doors so this is where they might stop to unload their deliveries. It would not be surprising therefore that markings might exist in the area that are unrelated to the incident in question…and this is what we observed.

Although not very visible in the above photo, there were a number of markings, mostly scratches, in the pavement of the parking lot in the vicinity of the yellow painted rectangle. Without further information it would be difficult to evaluate whether some of these markings were related to the Monte Carlo's motion.

As we come closer to the red pillars we begin to see some obvious scratches, particularly on the concrete pad as shown in the photo below.

Scratches become more visible when entering the concrete portion of the area at the red pillars. The angle of a majority of these scratches would suggest that they are unrelated to the motion of the Monte Carlo.

Clear evidence of the Monte Carlo's presence is indicated by a fresh contact to the right pillar as shown in the photo below.

Looking at the right pillar there was obvious evidence of a recent impact.

Although not visible from the angle shown in the photo below, there were tire marks on the concrete pad leading to the front doors of the building.

View of the concrete pad leading to the exterior, front doors of the Costco building. Faint tire marks were visible on the concrete however they are not visible from the angle shown in this photo.

Thus, unless the evidence was previously destroyed it would suggest that visible tire marks were not produced by the vehicle until the point where it made contact with the red pillar.

Much of the important evidence about this happening was only available to the investigating police and, up to this point, they have not provided any indication of what evidence existed. The problem arises that, when police only provide conclusions, without any evidence to support those conclusions, it is not possible to determine if those conclusions are valid. It remains to be seen how this event will unfold.

July 24, 2014

Safe Transportation of Children – An 800 Pound Gorilla In The Room

On Sunday, July 20th, 2014, a serious collision occurred on Perth Road 113 (Embro Road), south of Stratford, Ontario. While no one was killed, six children were injured and at least one sustained critical-level abdominal injuries. In all the years of our work in the field, both as a motor-vehicle safety researcher and as a private accident reconstructionist, child safety in motor-vehicle collisions has been officially hidden from public discussion, even though as parents, relatives and responsible officials of various institutions and organizations, persons should understand that their responsibility to protect children should over-ride any others.

View at the accident site on Embro Road showing a typical news media interview, likely with a representative of the police who investigated the collision.

When children are involved there is an understandable reasoning in society that information about them must be withheld. On the flip side of that coin, when the withholding of that information actually endangers children's lives, society must grasp that realization and evaluate what is more important.

The transportation of children in motor vehicles has always been a challenge. While various improvements have been made over the decades to improve adult safety,

childrens' safety lagged behind. Mandatory seat-belt use laws were enacted in the Province of Ontario in 1976 with no protection for children who were placed into the back seats of motor vehicles and forced to wear lap belts that were "designed" (if one can use such a discription for early generation seat-belts) for adults. There appeared to be no understanding of seat-belt geometry and the extreme danger that children would be exposed to because of submarining under a lap-belt. Child seats were introduced much later, but even so there was a lack of recognition that there was a gap for children that out-grew child seats but were still too small to be placed in adult lap belts. Belts with shoulder harnesses and booster cushions finally began to be introduced in the 1980's. In fact, our University of Western Ontario Multi-Disciplinary Accident Research Team was the first in our area to make a special order to Ford of Canada for a lap-shoulder, 3-point belt that we installed in the back seat of one of our Ford Tempo vehicles. But regular persons were simply left in the dark.

The "800-pound gorilla in the room" is that the transportation of children in motor vehicles still remains a safety challenge. When inappropriate injuries occur they are not discussed and are diligently hidden by official entities from public awareness. The rationale is that such discussion is inappropriate for public consumption and it should be left to the limited group of stake-holders who will make decisions for society. Unfortunately, as history demonstrates, these few stakes-holders are incapable of generating the public's urgency to make the improvements that are necessary. There is no panecea that prevents family members from being exposed to the discussions about their childrens' injuries while also developing the momentum in the general public that causes change to take place. In our view, in most instances where public safety is concerned, secrecy has almost always been the wrong direction to follow.

July 18, 2014

Drivers of Horse-Drawn Wagons Also Have Responsibility For Road Safety

While it has been our experience that drivers of motor vehicles are more often to blame for collisions with horse-drawn wagons, that blame is not 100%. As in almost every scenario individual instances demonstrate that individuals are to blame and not classes of beings whether those be from different races, religions, ages…you fill in whatever adjective. This is demonstrated in the following example of a horse-drawn wagon we

observed south of Walkerton Ontario yesterday afternoon. The photo below was taken of a southbound, wagon being pulled by a single horse on a county highway.

View of southbound wagon being driven in the middle of the lane of a county highway. If the load mattresses prevent us from seeing the driver of the wagon then surely the driver can also not see us.

We might believe that the mattresses on the wagon are some primative “air bag” system perhaps believed to prevent the occupants of the wagon from being injured. But that belief would be complete folly. Our point is that the driver of this horse-drawn wagon cannot see anything behind him yet he travels fully within the southbound lane of this relatively busy highway. Passing such a wagon gives no assurance that the driver of the wagon knows that the passing is taking place.

Drivers of motor vehicles must use the opposing lane to pass such a wagon while the driver of the wagon has no way of knowing when such passing might take place.

If one looks very closely at the pavement just behind the wagon you might be able to distinguish some thin, light-coloured lines produced by the wheels of the wagon. Thus it is possible to look at the position of those lines to learn about the wagon's position within the lane. The photos below provide progressively earlier views of the wagon's motion and we can observe the light-coloured lines to learn how the wagon was positioned in the lane for a considerable distance.

Examination of the light-coloured lines produced on the pavement by the wheels of the horse-drawn wagon can indicate the position of that wagon for a long distance back from its current position.

Following the thin, light-coloured lines on the pavement we can see that the wagon does not follow as straight course within the lane but, at times it makes some major changes in direction. Take note of the change in direction of those lines in the foreground of this photo.

Looking at the thin, light-colours lines produced by the wheels of the wagon it is clear that it made a wild change in direction in the lane at the point shown approximately halfway to the location of the wagon.

If you look very closely at the above photo you should be able to see how the lines produced by the wagon suddenly take a wild change in direction, as if perhaps the wagon operator did this deliberately so could glance behind him. But we could never be sure. The point is that the wagon operator is essentially blind to the happenings behind the wagon.

This is a dangerous situation that should be brought to the attention of both drivers of motor vehicles and particularly drivers of such horse-drawn wagons. As shown below, the wagon could be seen from a great distance because of the current topography however that could easily change.

View of horse-drawn wagon from a substantial distance.

If the wagon was just beyond a hillcrest and a fully loaded tractor-trailer came over the horizon, from behind it, then the scenario could become very different.

July 10, 2014

Illusions In Traffic Can Be As Deceiving As Houdini

Why do we seemingly make the wrong perception of where traffic is located on the highway? Well, sometimes the situation can be quite deceiving, as shown in this example.

Below is a northbound view along Highbury Avenue just north of Manning Drive, south of London, Ontario. We see a very tall farm tractor in its proper lane and would think nothing of it.

View of southbound tractor travelling in its own lane on Highbury Avenue south of London, Ontario.

Now let us reverse this scenario a few seconds so the tractor is further away, as shown in the photo below.

View of southbound tractor but from further away, or a few seconds earlier than the previous photo.

Because the tractor is further away we cannot see where its wheels meet the road surface but it is still obvious that it is in its proper lane. Now let us reverse another few seconds so the tractor is even further away, as shown below.

From a fews seconds earlier, this view appears to show that the tractor is in the wrong lane because we cannot see the road surface and because of the curve in the road that “shifts” the position of the tractor in our mind.

Now the tractor appears to be on the wrong side of the roadway centre-line. Certainly, if we reverse another few seconds it would appear so as shown below.

From a distance a vehicle on a curve may appear to be on the wrong side of the road and cause a nervous driver to react by steering toward the right, gravel shoulder resulting in a loss-of-control event.

Nervous drivers who suspect a vehicle is in their lane may steer to the right and possibly even off the pavement and onto the right gravel shoulder. We see many head-on collisions on curves like this because drivers lose control of their vehicles when their right side wheels inadvertently enter into a gravel shoulder.

So, when we ask “Why did that driver swerve away to avoid another vehicle that was obviously on its own side of the road?” the answer may be a little clearer with this example. Houdini sometimes appears on the road and plays with drivers’ minds.

July 7, 2014

"Engine Stall Is Not, Per Se, A Safety Defect"

While reading the numerous incredible comments of the Valukas Report of the General Motors ignition switch detect we just had to stop at Page 83 of the 325 page document where it indicated the following:

"*On May 17, 2004, during a NHTSA visit to the GM Milford Proving Ground, GM gave a presentation entitled "Engine Stall & Loss of Assist Demonstration". The purpose of the demonstation was to establish through demonstation and data that engine stall is not, per se, a safety defect. The driving demonstration permitted NHTSA officials to experience whether a vehicle could be controlled after a vehicle stall on a variety of different road courses."*

Having just spent several hours reviewing the previous incredible 82 pages it illustrated that GM engineers did not even know the most basic facts about their own vehicles, on which they were the experts, such as the fact that if a Cobalt experienced an engine stall the air bags would not deploy. These are the same clowns that formed the above opinion. As disrepectful as this comment is, what other comment can we make? How could anyone with any professional training that would qualify them to obtain an engineering degree, gather together with others with similar designations and make such an incredibly uninformed presentation? In a real-life scenario, a little old lady driving on a busy freeway experiences an engine stall at highway speed and these clowns indicate there is nothing of concern about that happening. This was the expertise that took (at least) a dozen citizens to their graves. Absolutely incredible.

July 3, 2014

Progress on Bicycle Data Acquisition System

Much like the multiple video camera system we employ for motor vehicles, we have also been working on a similar system for a bicycle. The photos below show some of the system's features.

Overall view of bicycle and helmet equipped with instrumentation to document the bicycle's motion, the forces it sustains, and the focus of attention of the rider.

View of GoPro video camera pointing at a simple computer that displays the bicycle's speed.

View of GoPro video camera pointing at the face of an iPhone that is set to record the accelerations and gyro results. Knowing the precise timing of commencement of recording is important when wanting to synchronize the views of all the video cameras. This camera also captures the cadence of the rider and certain road features.

A rarity is that we often do not examine what lies behind a bicycle, thus a GoPro camera mounted to the back of the bicycle and facing rearwards captures the actions of vehicles approaching the bicycle.

A GoPro camera mounted to the front of a bicycle helmet and pointing rearward enables documentation of the rider's eye motions and therefore provides an indication of where the rider's attention is focused and for how long.

It is expected that testing of this system will result in improvements and adjustments as was the case with the motor vehicle system described in previous news and articles.

July 3, 2014

Death of Flagman On Highway 3 By-Pass in St Thomas Ontario

Stepping into traffic, even when wearing a traffic vest, requires that a flagman be vigilant for situations where a driver may be distracted and may not be looking in the direction where the flagman has stepped out.

Having worked on roadsides of literally thousands of collision sites for the past 33 years we are aware of the dangers that exist. It requires more than the growth of an extra set of eyes to be protected from all possible hazards. Even the most experienced person can become surprized by, or fall victim to, a vehicle if the situation is repeated over many years and numerous encounters.

It is reported that yesterday, shortly before noon, a flagman, Brian Daniel, 55, was killed when he was struck by a westbound pick-up truck driven by Benjamin Dickout, 45 of Malahide Township. Police have charged Dickout with dangerous driving causing death.

Collisions involving areas of road construction are complicated. The set-up of a site where both drivers and workers are sufficiently safe is much more involved than most persons realize. Drivers often do not pay sufficient attention to the changes in the road around a construction site and often leave it to the expertise of those who create it to guarantee its safety. As always, drivers simply drive too fast, not just in areas of construction, but everywhere.

Unfortunately those responsible for development of a safe site also often lack sufficient understanding of what might constituate a hazard. Creation of a safe site requires an understanding of how drivers detect, identify and evaluate information. That level of education and experience is simply non-existent in those whose responsibility it is to set-up a construction site. For this reason the Ontario Ministry of Transportation has dedicated a separate manual, Book 7 of the Ontario Traffic Manual, to detail precisely how to set up a construction site, and the manual provides numerous examples. This is nothing new as such guidelines have existed for many years in every jurisdication in North America, with only slight variations. Even with such detailed guidelines hazards exist because how drivers behave cannot be protected against in every situation.

The position of a flagman at a construction site can be exceptionally difficult as it involves a repetitious activity of controlling traffic that, seemingly in all cases, performs in the manner expected. Yet it requires continual observation of that traffic for rare instances where a driver may not perform as expected. The flagman's attention must also be taken away from that traffic in order to examine the various construction vehicles and workers to ensure that traffic is not released into impact with them.

An example of a flagman whose attention is drawn away from traffic as he stands in a live lane. The stop sign that is being held is at the height of his eyes and might also present a problem in obscuring his sight on selected occasions.

Even the height of the stop sign that a flagman carries might become a safety hazard, as shown in the photo above, if it can potentially block the flagman's view.

Often it is not realized that the figure of a human body may only be a couple of centimetres high in a driver's field of view when examined from a distance of a few hundred metres. Understandably, the width of that body would be even narrower. For this reason such a flagman might be difficult to detect in the environment of the many large vehicles that might be in the area. This fact is often misunderstood when the comment is made: "There was a clear line of sight for 400 metres therefore the pedestrian should have been seen". It requires a detailed study of each individual scenario to understand if a driver has been driving with a lack of due attention to the road ahead.

Gorski Consulting
London, Ontario, Canada