

Gorski Consulting Website

Archived News - 2014 - August

August 29, 2014

Signs That Give The Wrong Warning

In a modern society we hope that something as seemingly simple as the installation of warning signs on a roadway would be done properly. But that is not always the case. In the latest article that we have uploaded to the Articles page of this website we discuss a specific incident where employees of the City of London stopped a work truck on a roadway and failed to detect that their actions were causing confusion to the driving public, almost resulting in a collision on several occasions. We encourage readers read the article.

August 27, 2014

Attempt to Evade Police Also Results in Miraculous Escape of Death

We reported a couple of days earlier that we might have an opportunity to discuss an accident that occurred on August 25, 2014 on Vanneck Road just south of the intersection with Gainsborough Road, west of London, Ontario. That possibility has now become reality as we have just posted the article on the Articles webpage of this site. We are not sensationalizing when we say that the driver in this collision was extremely lucky to survive despite his decision to travel at an incredibly reckless speed.

August 26, 2014

Difficulties Posed by Heavy Truck Slow Acceleration

We have just uploaded a new article on the Articles webpage that presents an example where many factors come into play when the slow acceleration of heavy trucks might lead to a collision. We encourage readers to check it out.

August 25, 2014

Driver Fleeing Police Miraculously Escapes Death



Photo by London Free Press showing the burned out vehicle in which the driver miraculously survived.

Call it a game of Russian Roulette with three bullets in the six chambers or maybe sky-diving without a parachute, but sometimes someone just gets lucky and survives.

Such was the case this early morning, Monday, August 25th, 2014, when it was reported that police tried to stop a vehicle on a rural road just north of London, Ontario. The driver of the mystery vehicle did not stop and a chase was on. Officially, it is reported that police called off the chase and then later, around 2 a.m., discovered that the vehicle had crashed on Vanneck Road just south of Gainsborough Road, just west of the limits of the City of London. The Special Investigations Unit (SIU) became involved and so the story goes...

Whatever the truth is, we can say that this driver literally escaped death by the skin of his teeth. We may post the full story of this shortly, if time permits.

Additions To “Road Data” Webpage of Gorski Consulting Website



Evidence of numerous impacts of the undersides of vehicles against the lip of an incomplete road repair on Vancouver Street in London, Ontario in the spring of 2014.

Two additional datafiles have been included recently to the “Road Data” webpage of this site entitled “Bridge Junction & Railway Track Data” and “Incomplete Road Repair Data”. As suggested by the titles, these files contain data from driving our test vehicle over those features. Unlike most of the road data, these road features exist over very short distances therefore the displayed data capture is provided for a time of only 2 seconds. It should be obvious that data displayed beyond those 2 seconds would be rather meaningless because the vehicle’s vibration would no longer exist and would not provide a meaningful demonstration of the feature’s effect on the vehicle.

It is likely that we will prepare an additional article shortly that will summarize all of our road testing. It will be possible to compare the performance of various roads to that of bridge junctions, railway tracks and incomplete road repairs. There are some obvious outliers where, clearly, a particular road segment or feature has performed poorly while

others have performed exceptionally well. Such important data has never been available to the travelling public.

August 22,2014

NHTSA & IIHS Oblique and Narrow Front Impact Test Procedures Leave Much To Be Questioned

Few know why researchers at the National Highway Traffic Safety Administration (NHTSA) and Insurance Institute for Highway Safety (IIHS) came to their decisions regarding how they would conduct narrow/oblique frontal impact tests to assess the safety of newly manufactured vehicles. The IIHS has done well to attempt such tests yet there is little information about the specifics of the test procedure. Similarly, it appears NHTSA is developing, or has developed, an oblique narrow frontal impact test but it too does not appear to be fully described. We have concerns about these procedures because of the possibility that they do not properly replicate the conditions of a real world collision. However, since details about each test are scarce it is difficult to judge whether those concerns are appropriate.

We came across an NHTSA research paper which might provide some limited light on the issue. The paper, authored by James Saunders and Dan Parent was reportedly presented at the January 2014 Government Industry Meeting, in Washington. It would appear that the presentation was a comparison of the proposed NHTSA test versus that of the IIHS. Figures from that presentation appeared to show some details of the proposed NHTSA test, such as that shown below.

BACKGROUND – NHTSA OBLIQUE RMDB

Research Moving Deformable Barrier (RMDB)



Near-Side Occupant

Far-Side Occupant

RMDB Speed	56 mph (90 kph)	
Overlap	35 percent	
Impact Angle	15 degrees (PDOF = 345)	
Occupants	Near-side (Driver)	THOR Mod Kit 50 th Male
	Far-side (Passenger)	THOR Mod Kit 50 th Male

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View of likely protocol for the NHTSA Oblique, Narrow Frontal Impact Test

The above figure seems to suggest that a moving barrier approaches the stationary target vehicle at a speed of 56 mph (90 km/h). The selected speed would seem to be attempting to recreate a collision severity where both vehicles are in motion as would be the case in a typical, real-world collision. Again, it is not clear to us if this is the case as we were not present during the presentation, however, it would seem to be so. We have expressed our concerns in the past regarding the differences between staged testing and real-life collisions. If our understanding of the above procedure is correct then we must continue to be concerned.

We appreciate that conducting tests that replicate real-life collisions may be too complicated and therefore a compromise was apparently made. That compromise appears to be that one of the impacting objects must be stationary and that no rotation about the vertical axis (pre-impact yaw) can exist. While this removes the complexity, we must say that it also makes the test significantly different from what one would experience in the real world.

In our experience real-life impacts of this type are most common on rural, two-lane highways where one vehicle enters a state of loss-of-control, enters into a counter-clockwise, yawing, rotation, and the left front of that yawing vehicle strikes the left front of the other vehicle in a narrow frontal offset. It is often the case that the driver of the non-loss-of-control vehicle makes an attempt to avoid the collision by steering away (to right) and that makes the real life test even more divergent from the government test. It is not the initial overlap or angle of approach that are important but it is also important to replicate the motions of the vehicles after the initial contact and through to separation. It is here where the government test will likely be greatly divergent from reality and it will not subject the new vehicle to the proper standard that it should.

It would seem to us that, with the hundreds of thousands of real-life collisions that have been documented in the National Automotive Sampling System (NASS) over the last 35 years researchers such have obtained a good understanding of what happens in real-life collisions. But that is not necessarily so. It seems to us that NHTSA has focused their investigative efforts on obtaining measurements of the vehicle crush in order to estimate the change-in-velocity (Delta-V) while treating the rest of the available evidence as irrelevant. In particular we have advocated that the magnitude of vehicle crush, although important, is not all there is to understanding real-life collisions. We have advocated that the “shape” of the vehicle, or how it has been deformed from its original state could be just as important. NASS field investigators return from the field with just the crush data, however they do not document the shape of the vehicle. For example they do not necessarily document that the left front wheel has been displaced 10 inches rearward and 3 inches inward compared to its original state, or that the wheel is pointed 15 degrees to the left. We say that such additional information enables the analyst to create a scale diagram of the damaged vehicle and then overlay it with the original-dimensions scale diagram of that vehicle. From this analysis it is possible to study the motions of structures of the vehicle through the time of contact and therefore obtain a more meaningful understanding of how the protocol of a staged test should be adjusted to best fit the results of the real-life collision.

NHTSA is apparently in the process of revamping the NASS investigative procedures by the year 2016 and will even change the NASS CDS name to CISS (Crash Investigation Sampling System). It is not clear whether these changes will create the type of data that could make staged tests such as the Oblique Narrow impact more representative of real life.

August 19, 2014

Many Dangers Lurk When Motorized Traffic Mixes With Cyclists

The North American roadway system has still a long way to go in keeping cyclists safe. The fact that cyclists themselves may be responsible for many of their fatalities and injuries should not be a reason to slow down changes to our road system. Yet drivers can be surprized and perplexed by cyclist behavior. For example, the photo below shows a cyclist making an arm gesture while a vehicle approaches from the rear. What does the arm gesture mean?



Is this cyclist just stretching his/her arm or will a right or left turn be taking place?

Normally, an outstretched arm indicates a left turn but that is supposed to be performed by the cyclists left arm, not the right arm. Should the driver of the vehicle behind simply ignore the gesture?

A good roadway system is forgiving of users' mistakes. While not all folly can be saved by engineering, some can. Removing cyclists from high speed highways where there is no separation from more massive vehicles is an important step.

What About Distracted Walking?

We understand that distracted driving can lead to fatal consequences and that new laws have been enacted in the Province of Ontario to deal harshly with drivers who use hand-held devices while driving. But what about pedestrians?



Is this a potential fatal collision?

If a pedestrian is fiddling with his or her cell phone or other device while walking into traffic is that also not a dangerous act? The difference is that the pedestrian is most likely to be the one killed and not necessarily the driver who strikes him/her (although that is not a guarantee). However, is this still not a fatal collision? Should it matter to police whether the fatality occurs to a driver or to the persons that he/she strikes, versus the fatality being a pedestrian? It is still a fatality, one way or the other. Will the Province of Ontario need to introduce “Distracted Walking” legislation? It makes one ponder.

August 12, 2014

Mississauga Fatality Reminiscent of Paul Walker Fatal Crash From Fast & Furious Fame

Striking similarities exist between the collision of a 2004 Honda Accord in a secluded industrial park on a circular geometry of Kestrel Road in Mississauga, Ontario with the well-publicized, fatal crash of the Porsche in which Paul Walker was killed on November 30, 2014, also in a similar, secluded and circular road. Paul Walker was a film star in the very popular film series “Fast and Furious” and he was the passenger in the Porsche that crashed and burned on an industrial park road in Santa Clarita, California.

In the Mississauga crash of Saturday, August 9, 2014, the driver of the Honda Accord, Mohammad Haniff, 29, was killed when the Honda rounded a curve on Kestrel Road, the vehicle began a counter-clockwise rotation and then struck a tree. The Honda was split into three pieces and a small fire developed that was quickly extinguished. The Porsche in Santa Clarita site also travelled around a curve prior to exiting the road. Unfortunately the fire that engulfed the Porsche could not be extinguished and, as a result the two occupants perished.

The dissimilarity between the two collisions is also related to the quality of the evidence that could be found. Even after attending the Kestrel Road site two full days after its occurrence we were still able to detect the yawing tire marks of the Honda at least 92 metres prior to the location where it struck the tree. The speed loss over that distance of yaw should have been in the range of 80 to 90 km/h.

In contrast, the police investigators in the more-notable crash in Santa Clarita were only able to locate as short distance of yaw marks of about 23 metres before the Porsche’s crash with a lamp standard. Investigators in the Paul Walker crash claimed that the Porsche’s speed was in the range of 90 mph (144 km/h) even though, following the impact with the lamp standard, the Porsche only travelled an additional 20 metres to final rest. In yawing the 23 metres the Porsche might have lost a speed of about 42 km/h, requiring the remaining 102 km/h to be lost in the remaining 20 metres distance. That possibility remains questionable.

In the Mississauga crash it was possible to detect yaw marks shortly after the vehicle exited a sharp left curve as shown in the photo below.



View, looking partway through the left curve of Kestrel Road where the Honda Accord's yaw marks first became visible, about 92 metres from the eventual tree impact.

The photo below shows the very faint yaw mark about 92 metres from the tree impact. The visibility of the thin tire mark has been enhanced by our scribbling of grey dots along its length.



View of yaw mark as it approaches the outside curb of the curve. Grey dots have been drawn along the length of the tire mark to help in its visibility.

As the yaw marks approached the outside curb there was an actual brushing contact of the curb at the point where it met with the driveway, as shown in the following photos.



Portion of curb at the junction of a driveway where the right tires of the Honda Accord brushed by the curb and produced some markings.



View of curb showing area where the right side tires of the Accord made contact.



Close-up view of curb showing evidence of the sidewall of the Accord's tire making a black transfer. Also the weeds were also pressed against the curb and the juices of the plants were also pressed onto the wall of the curb.

Interestingly, the concrete gutter and portions of the asphalt surface where the yaw marks existed were also scraped as shown in the photos below.



View of concrete gutter next to the outside curb of the curve where the Accord's yawing produced light-coloured scrapes in the concrete. This view is reverse to the Accord's direction of travel (i.e. the Accord is approaching the camera).



View of the typical, small scrapes in the pavement produced within the yaw mark produced by the Accord.

The Accord eventually crossed the roadway centre-line and continued to rotate counter-clockwise toward the tree as shown below.



View of yaw marks headed toward the tree that was struck and caused the Accord to separate into three pieces.

Beyond the tree one of the pieces of the Accord caught fire and was extinguished by emergency personnel. The area of burned out grass is shown below.



View of burned out grass with the impacted tree shown in the background.

Investigating police suspect that there might have been a second vehicle, a Toyota Camry, that might have had some influence on these collision events and they are presently searching for that driver.

Similarly in the Paul Walker crash there was some concern raised whether the Porsche's loss-of-control could be related to another vehicle but no evidence was ever found to suggest this was so.

August 11, 2014

Tire Marks From Travelling on a Loose-Gravel Shoulder

As we continue to discuss the evidence of loss-of-control collisions that occur on rural highways we have added a further article to the Articles webpage of this website which discusses the characteristics of tire marks that one might expect to see when a vehicle reverses on a gravel shoulder. Although such evidence might be uncommon it is necessary for investigators to be able to understand those characteristics when they are faced with various tire marks left on a roadside.

August 8, 2015

Cycling Fatality In London Ontario Emphasizes Issue of Poor Visibility From the Cabs of Most Large Trucks



Bicyclists, sharing the same narrowed lanes as a large concrete mixer truck pose a special danger particularly due to the lack of visibility of the cycle that is available to the truck driver.

It has been reported that a 19-year-old female cyclist was killed yesterday, August 7th, 2014, when her bicycle was run over by a concrete mixer truck at the intersection of Riverside Drive and Wharncliffe Road in London, Ontario. Details of the incident have not been released however photos of the crushed bicycle and the rider's helmet show 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.

We have prepared an article that discusses the issue of truck driver visibility and the deficiency that exists in a truck driver's view of objects located near a truck's right front fender and wheel. We also provide a larger discussion of bicycle safety. We encourage readers to visit the Articles webpage and review the article.

August 5, 2014

Another Review of Loss-of-Control Tire Marks on a Gravel Shoulder



Loss-of-control tire marks leading to a vehicle's rest position and then exiting without an impact are a valuable source of study for investigators.

At Gorski Consulting we continue to emphasize the importance of understanding tire marks from loss-of-control collisions. That understanding can also be gained in situations where a vehicle goes out of control but the driver is fortunate not to have struck anything. Such is the case in the latest article that we have uploaded onto the Articles page of this site.

Shortly after the gravel shoulders were re-graded on Clarke Road on July 31, 2014, in north-eastern London, Ontario, Canada, a vehicle entered the right shoulder, rotated counter-clockwise, crossed the road, and came to rest on the opposite shoulder. The result was some interesting tire marks that could help investigators with their understanding of the characteristics of loss-of-control tire marks. In the posted article we have purposely refrained from mentioning which tires of the vehicle were involved with each mark or how the vehicle motion took place. This is so that readers can attempt to decipher the issue themselves and therefore become their own “Sherlock Holmes”. We believe that, with a little study, there is a sufficiency of good quality evidence that the reader should be able to solve this small puzzle. If readers want our interpretation then we encourage your contact through the Contact page of this website.

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