

Gorski Consulting Website

Archived News - 2013 - January

January 31, 2013

An Inquirer Asked: "A Driver Puts His Foot on the Brakes and Decelerates at -2 M/S^2 . If The Initial Speed Is 50 M/S , How Long Will It Take The Car To Come to a Stop?"

Our Response:

Firstly, a speed of "50 M/S" is "50 metres per second" and that is an awfully fast speed, thus we suspect the inquirer must have meant to write "50 km/h". However, let us assume for a moment that this inquiry was not an error. We can transfer the 50 metres per second into units of "kilometers per hour" by multiplying by 3.6. So, $50 \times 3.6 = 180$. So the inquirer has asked us to assume the driver of this vehicle was initially travelling 180 km/h!! Wow, that is a very high speed.

Ok, the inquirer wrote that the driver was slowing at a rate of " -2 metres per second" every second. That is a fairly moderate or slow rate of braking that would be slightly less than what a typical driver would do when approaching a stop sign or traffic signal. If the driver was initially travelling at "50 metres per second" and lost "2 metres per second every second", then clearly we would divide 50 by 2 and say that it would take about 25 seconds for the driver to come to a halt. For example, after one second the vehicle would be travelling "48 metres per second" and so on, losing "2 metres per second" every second until the vehicle is stopped.

Another way of saying this is in terms of km/h. A deceleration rate of -2 m/s^2 can be multiplied by 3.6 and we can say that the deceleration rate is at "7.2 kilometres per hour" every second. If the initial speed was 180 km/h, then after 1 second the vehicle's speed would be 172.8 km/h, and so on. Or if we multiplied the 7.2 kilometres per hour by 25 we would arrive at 180 km/h which confirms that after 25 seconds all of the speed is lost.

If the inquirer made an error and really wanted to know how much time it would take to come to a halt from a speed of 50 m/h then, at a deceleration rate of " $-7.2 \text{ km/h per second per second}$ " we would divide 50 by 7.2 and arrive at a time of about 6.94 seconds. That is a long time and indicates again that this is a relatively slow rate of deceleration.

We hope this helps.

Status of Porsche Driver And Investigation Of November 12, 2012 Crash On Highbury Avenue And Dundas Streets In London, Ontario

We acknowledge continual inquiries to our website regarding the identity and status of the Porsche driver and the investigation related to the crash that occurred on November 12, 2012 at the intersection of Highbury Avenue and Dundas Street.

To avoid further frustration to those inquirers we want to clarify that we have been retained by one of the involved parties in this matter and as such we expect not to release any further information until such time as it is released by police or the information becomes public knowledge in some other fashion. We hope our readers will understand that, once we are retained by an involved party, there is an element of confidentiality that must be maintained. We believe the name of the involved Porsche driver has not been released by police however we have no knowledge why that is so. We hope this will cease any further inquiries about this matter on this website.

Reported "20-Car-Pile-up" on Highway 6 South of Arthur Is Not Typical

We commonly see reports of large numbers of vehicles being involved in collisions on controlled-access expressways such as Highway 401 in Ontario. Part of that is has to do with driver's being accustomed to long unbroken periods of steady high speed, interaction of large trucks and small vehicles with significantly different braking capabilities the generally larger traffic volumes on these expressways.

It is uncommon therefore that news agencies are reporting that a 20-vehicle-pile-up occurred this morning, January 31,2013 on Highway 6, just south of Arthur, Ontario. Although Highway 6 is a busy route it should not experience these types of events. No information has been provided at this time as to how this incident occurred, however we doubt that such information will ever be provided. It concern is that snow squalls were forecast for this region today and that the road surface could have been slippery. Again, we are skeptical that poor road conditions would be properly identified even if they were a factor.

Roads and Highways in the London Ontario region were variable this morning. In London itself roads were generally bare and dry. However travel northward just north of the City would have caused drivers to experience snow squalls, some heavy at times.

January 30, 2013

Hamilton City Workers Fired But Does Guilt Also Rest With Supervisors, Managers and The City?

The extent to which inappropriate roadway maintenance has been kept secret has been demonstrated in Hamilton Ontario this week as 29 front line public works employees

were fired for submitting false records of their daily work. Everyone at City Hall from the Mayor to City Manager have indicated they knew nothing of the problems while also promising to get to the bottom of the corruption.

It was revealing that the Works Department reportedly consisted of 81 employees who should have been responsible for all activities of maintaining the City's 6500 kilometres of roadway to keep the public safe. Yet, in the public media the only activity discussed was "repairing pot-holes". As if the sole function of all 29 employees was to fill potholes, every day, all week, all year. The fact is that these employees were most likely responsible for more than just filling pot-holes but that their duties likely included all matters of road maintenance, and some of these activities were to deal with problems that were likely life-threatening to the general public.

For example, how many of the 81 employees of the Works Department must have had to deal with snow and ice removal during winter? If these workers were not filling in pot-holes were they also not plowing and salting/sanding the roads of Hamilton? When a collision occurred in Hamilton how many of these collisions were the result of, or influenced by, the fact that the City Works Department did not do the roadway maintenance job that they were being paid for? How many of these potential roadway problems were reported by the Hamilton City Police, who in the end, receive their pay from the City of Hamilton? The circle of corruption runs much wider than these 29 front line employees. It runs directly into the offices of the supervisors and managers who should have known what was taking place. How many of these supervisors and managers will get caught up in this scam remains to be seen. It should run into the offices of many high-ranking City personnel, not only in Hamilton, Ontario but across the Province of Ontario where the manner of upkeep of Ontario's roads is being kept secret from the public while persons are collecting money under the table.

Not surprisingly the political mice are now scrambling around for a hole in which to hide.

Crossing Guard Safety A Difficult and Complex Problem

Sarnia Ontario residents are still grappling with the death of Jillian Keck, the 10-year-old girl who was tragically killed when she followed a crossing guard into the intersection of Murphy Road and Cathcart Boulevard in Sarnia on January 7, 2013. Now the driver of the striking vehicle, 79-year-old Hilda Minnis has been charged with "Dangerous Driving Causing Death". It is undoubted, in our evaluation, that families and friends of all involved, including the charged driver, find it difficult to deal with these consequences. Yet, it is a reminder that the cause of these events can be complicated and not easily fixed.

Take for example the events in the London area that we observed on the morning of January 30, 2013; a very mild day with periodic heavy rains when visibility was difficult at times. In a school zone we observed the sight shown the photo below.



Crossing guard in school zone at busy intersection in London, Ontario on January 30, 2013.

A crossing guard was scanning the area for the next opportunity to guide children across the busy intersection. However the cold and rain made it an uncomfortable day for anyone to be outside. Naturally, the crossing guard pulled a hood on his/her head for protection from the elements. But this head protection reduces the crossing guard's ability to see as shown in the closer view below.



Close-up view of crossing guard wearing head protection while potentially limiting visibility.

We would be the last persons to say that this crossing guard was negligent and it would be a natural action to wear such head gear in these weather conditions, yet, it causes a complication. Children might also be wearing similar head protection with a similar lack of visibility. It is not something that has an easy solution.

Amongst these difficulties we interact with persons who are in an exceptional hurry to meet their maker. On a nearby road just on the outskirts of London we find the driver who decided to pass our vehicle in a no-passing zone as shown in the photo below.



This individual meets up with the crossing guard and disasters happen. When possible, police will fine such reckless actions but most often their actions are successful until that fateful day when a speeding vehicle unexpectedly comes out of the dip in the background of the above photo, our speeder tries to steer back into the proper lane, but loses control of the vehicle and a crash occurs.

These are complicated issues. Some, like the crossing guard, are the actions of average citizens trying to cope, while others like our speeding passer are simply reckless, period. What may have occurred that caused Jillian Keck's may also be complicated, with no easy solutions.

January 29, 2013

Charge of "Dangerous Driving Causing Death" Against 79-year-old Hilda Minnis in Traffic Death of Jillian Keck Is Uncommon For Elderly Drivers

While the death of a 10-year-old girl is a tragedy that has struck the community in Sarnia, Ontario, the subsequent charge of "Dangerous Driving Causing Death" against the driver who struck the girl at the intersection of Murphy Road and Cathcart Boulevard on January 7, 2013, is a very serious charge that requires substantial disregard for public safety by the driver in order for the charge to be reasonable.

It is hoped that investigating police took a good and detailed look at the facts. If the driver would appear not to have detected and responded to the presence of the child then one has to take into account the advanced age of the driver in their evaluation since this factor has been overlooked on numerous occasions, not only in police evaluations, but also in the field of civil litigation where we find ourselves providing expert opinion. In our experience elderly drivers generally do not commit driving offences that warrant such charges. Their apparent errors are often related to their reduced abilities due to their age. Their performance is often mistakenly equated to the expected performance of an average or young person. An evaluation of their actions is often based on a simplified scenario that is developed based on incomplete information by persons who are sometimes unwilling to acknowledge that the actual scenario could have been quite a bit different or more complicated.

Similarly, if the charge is based on statements from witnesses or other drivers then this basis has long been known as unstable. It should not need to be repeated in this modern age of unprecedented access to knowledge, that the information provided by our human species has the capability of changing like the colour of aameleon. Just because someone says they saw a "flying pig in a lime green jump suit" does not necessarily mean that it is so and we should be careful that some information that cannot be independently verified can be as realistic as that flying pig.

January 25th, 2013

UPDATE (1625 Hours): "Rollover" On Thompson Road Being Investigated by SIU

The London Free Press (LFP) is now reporting that a collision involving a minivan that occurred last evening on Thompson Road in London is being investigated by Ontario's Special Investigations Unit (SIU). Police had reportedly stopped the vehicle driver at Egerton and Homan Streets at about 1915 hours which would be about 15 minutes before the crash which reportedly occurred at 1930 hours. Egerton Street is the extension of Thompson Road to the north as the roadway passes over the Thames River. The intersection of Egerton and Homan is less than a kilometre north from the accident

site. The driver of the minivan reportedly sped away from police but police were reported to say that the crash was not a result of a police chase.

While the evidence at the site has not been examined in-depth, the vehicle came to rest on its wheels and it is not clear whether in fact the vehicle rolled over. Examination of the vehicle would provide a quick and easy determination of that possibility. However the impact with the lamp standard continues to be unreported.

The LFP reported that the 37-year-old driver sustained a fractured sternum. That is an unusual injury if it was the only injury that was sustained. Sternum fractures are usually accompanied by other injuries as they require substantial impact to the chest area. Isolated sternum fractures could be more likely to occur if the driver was struck by a deploying air bag while being "out of position" (OOP) although impact by such a deployment would be extremely dangerous as fatalities are not uncommon. This injury report may also be that the full extent of injuries may not have been provided to the author of the LFP article.

Police "Tight-Lipped" Over Cause of Mini-Van Loss-Of-Control Collision On Thompson Road In London, Ontario

The London Free Press (LFP) newspaper reported that last evening, January 24, 2013, a minivan was found "crumpled in the ditch on Thompson Rd. between King Edward Ave. and Pond Mills Road about 7:30 P.M."

The LFP article went on to state "Police at the scene remained tight-lipped about the circumstances of the crash pending an investigation, but did say weather could have played a factor" and that "police say (the road) was beginning to ice over in the cooling evening temperatures".

A photograph accompanying the article showed a minivan stopped, right-side up, in the darkness of a ditch but without sufficient illumination very little could be discerned from this view.

If the minivan driver lost control of the vehicle because the roadway was icy and slippery then that information should be revealed. However it rarely is revealed as the police and news media continue to be "tight-lipped".

We attended the site this morning. On our way we observed that London streets were beginning to receive the 2 to 4 centimetres of snow that was forecast for the day but the roads did not appear to contain any sand or salt. For example, the photo below was taken of a typical east London Street.



Road surface condition on a typical street in London, Ontario on the morning of January 25, 2013.

This is in contrast to the few days earlier when temperatures reached highs of -10 to -14 degrees Celsius during those days but snowfall in the London area was generally minimal. The photo below was taken on January 22, 2013, showing salt pellets on the road surface which have melted the snow/ice on the road surface.



View of salt pellets on the surface of an east London road on January 22, 2013. Snow/ice have melted even through daytime temperatures were in the range of minus 14 degrees Celsius.

Upon approaching southbound along Thompson Road on the morning of January 25th, this was the view of the curve and the condition of the road surface.



View, looking southward along Thompson Road toward the accident site. This is an upgrade with a left curve.

The temperature at this time was about minus 10 degrees Celsius. However there is no indication of any melting of snow on the road surface as shown in the previous photograph. We can confirm that we also observed no indications of any salt or sand on this road surface.

Although the environment looks wooded in these photos that is primarily because directly behind the camera is the Thames River and this area is some of the virgin woodland near the banks of the river. In fact this area is in the older, built up area of the City of London and not on its outskirts.

As we progressed further southbound to the end of the left curve we came across some tire marks in the snow which were typical of a vehicle that had gone out of control and slid into the right (west) ditch, as shown in the photo below.



Tire marks on right side of road indicate loss-of-control of vehicle as it slides into west ditch.

There was no question that this was the location of the minivan collision. The orange cone on the roadside sat on the base of a lamp standard that had been struck and fell into the ditch, as shown in the photo below.



Orange cone placed on the base of the struck lamp standard that rests in the ditch in the background.

There was no mention made in the LFP newspaper article that the minivan struck this lamp standard. Fortunately, its base was designed to break away when struck, as shown in the two photos below.



View of fractured base of lamp standard that is designed to break apart and release the lamp standard to reduce the severity of the impact.



Northward view of separated lamp standard lying in the west ditch of Thompson Road and the location of its base represented by the orange cone in the background.

The separation of the pole likely lessened the severity of the impact and likely reduced the potential injuries to the occupant(s) of the van. The minivan came to rest in the

brush next to the pole in the vicinity of the fresh damage to the brush shown in the photo below.



View of fresh damage to the brush near the final rest position of the van.

In summary, the consequences of this collision could have been serious had the lamp standard not released. It is unusual for a vehicle to go out of control on an upgrade, however if the road surface was slippery then it would be likely that the lessened tire forces would cause the vehicle to slide to the outside of the left curve in the way it had. When such events occur someone must be in a position to take responsibility to determine whether all reasonable actions were taken to prevent the incident. Police cannot simply look at the driver's actions and stop at that. If police are to be the truly independent personnel who have exclusive jurisdiction over investigating such matters then they must also be responsible for determining whether all proper actions were taken to ensure that the road surface was being maintained properly. The consequences of an improperly maintained roadway in winter conditions can be grave. For example, while at the site we observed a city transit bus passing northbound (and thus on the downgrade) through the curve as shown in the two photos below.



View of northbound City of London transit bus travelling along Thompson Road and toward the accident site.



View of transit bus passing by the orange cone where the present accident occurred. What would be the consequence if a fully loaded transit bus went out of control on this curve due to a slippery road surface?

What if this bus was fully loaded and went out of control on the downgrade of the curve and crashed due to slippery road conditions? The passengers of such a vehicle would be unrestrained and the consequences could involve multiple injuries and potential deaths. Yet, we are aware from previous investigations that this curve contains a *negative* cross-slope for northbound vehicles that has existed here for decades but (fortunately) has not yet resulted in a fatal collision. What if the bus loss-of-control was due to an improperly maintained road surface that caused it to be unnecessarily icy? Would it be proper for police to ignore that factor and not report it? Is this what our society believes is proper? If not, what is the difference when less severe events occur but could be related to improper roadway maintenance, improper signage, or due to a road geometry issue? Whatever the severity of the incident the causal factors need to be documented and reported so they can be properly prioritized and dealt with. It should not matter whether the causal factor was due to driver impairment, speed or inattention, or whether it was related to a roadway issue.

January 23, 2013

Significance of Breaking Through a Guardrail is Misunderstood - Gorski Consulting Reviews a "Minor" Collision in St Marys Ontario to Demonstrate Hidden Roadway Deficiencies

The focus of the Gorski Consulting website in the last few years has been to explore accident sites and discuss the evidence found there. With the focus on the accident sites, and less distraction from evidence found in other segments of an investigation, it has come to our attention just how often we fail to observe roadway deficiencies and how often police investigations and the official news media fail to report the existence or influence of a roadway deficiency on a motor vehicle collision. A reportedly minor collision in St Marys on Saturday, January 19, 2013 caught our attention and our subsequent examination of the site revealed a little more than what was reported to the public. As such we prepared an article on the issue which has been uploaded to the Articles page of this website. We encourage you to examine the article and send us a comment on the Contact page of this site.

January 21, 2013

Sarnia Ontario Councillors Select Objective Reasoning In Traffic Signal Deliberations

While it appeared a few days ago that Sarnia Ontario politicians were going to chose emotional reactions over objective reasoning in determining whether a city intersection should be equipped with a traffic signal, a recent article in the Sarnia Observer newspaper would suggest otherwise.

The issue stems from a tragic accident on January 7th, 2013 in which a 10-year-old student, Jillan Keck, was killed at the intersection of Cathcart and Murphy in Sarnia.

Since then, there has been considerable pressure applied to have traffic signals installed at that intersection as a means to prevent future tragedies. A few days ago, Councillor John McEachran, reportedly stated "Enough is enough" and indicated he would propose that a signal installation be considered at the next council meeting. Gorski Consulting has indicated that emotional reactions to tragedies may only promote more dangerous situations if full knowledge of the needs is not available via a detailed study of an October, 2012 traffic signal study at that intersection.

Common sense would now seem to prevail as the Sarnia Observer is reporting that several councillors want to study a police report of the incident before making up their mind. Other councillors indicated they would also like to see a "staff report" that will be presented at a February 4th, 2013 meeting.

While we agree that review of a staff report is sometimes helpful, we say again that the devil is in the details and the city councillors must review the original October 2012 report and the raw data that was gathered. While Provincial "warrants" for determining whether a traffic signal is needed are a valid method of making an objective decision, our experience in conducting similar studies indicates that the raw data can sometimes be skewed due to the necessarily narrow time frame during which data is collected and thus the raw numbers should be studied closely to determine whether they truly reflect the conditions at the site. For example, if two schools are located near the intersection as indicated then the coordinated release of children after school could produce a very large number of pedestrians on the streets for a very short time. A similar condition will occur during the morning when students need to arrive at similar times for the beginning of the school day. The data sampling must take these peaks into account. Large quantities of students in a narrow time frame can result in exceptional traffic conditions that cannot be taken into account under more generalized Provincial guidelines. Both the city councillors and the concerned public need to be appraised and informed of these special conditions before making a decision one way or the other. Issues like this are why we say that all persons involved must look at the raw data and not just a summary of it via a staff report.

In almost all the site examinations we have carried out where a tragedy has occurred, the residents that approach us invariably claim that "This is the most dangerous intersection" or something to that effect. While these comments are understandable one must consider, if all intersections are claimed to be dangerous, are we to install traffic signals, barriers, or have constant police patrols at every road segment? Surely there must be something to be considered when these are such recurring comments. Clearly one must sympathize with the those affected by the tragedy but one must also be able to differentiate between which sites truly need intervention from those that have experienced a tragedy due to chance.

Education/knowledge is the key and this is one of the reasons why we believe our website is important. We may not always have the right answer but our experience helps.

January 18, 2013

Car Fires Need To Be Documented To Ensure Effective Motor Vehicle Safety Standards

The way the incidence of a car fire was reported on a Sarnia Street this morning suggests that few understand the importance of documenting these events to reduce or prevent their occurrence.

The Sarnia Observer newspaper reported that a female driver pulled her car over to the curb as she was experiencing an engine problem. Subsequently a fire ensued from the engine compartment and consumed the vehicle.

Sarnia Fire Captain Kyle McKelvie was reported to have said "Everybody's fine" as the driver was able to escape the fire.

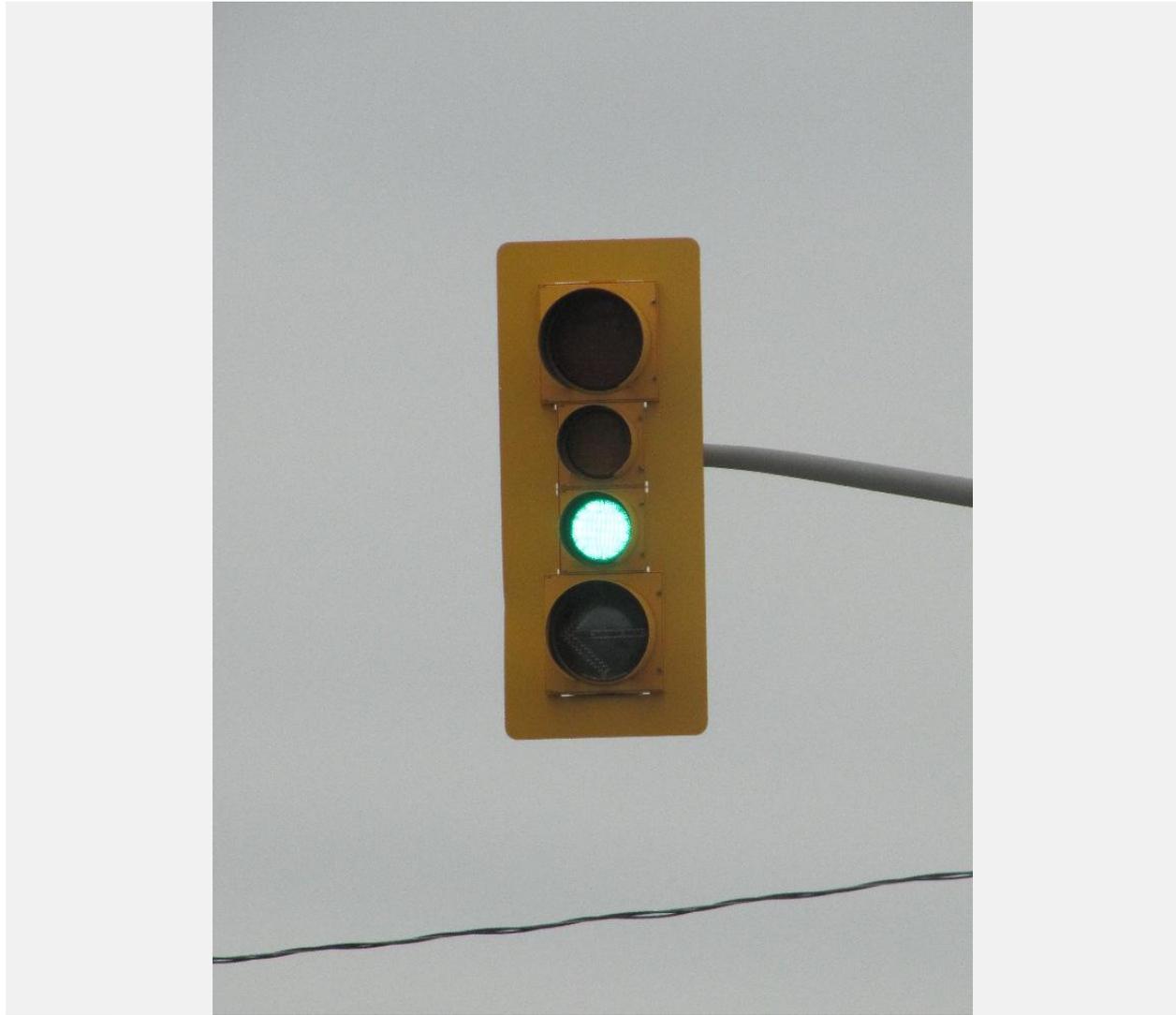
The Captain reportedly stated that "... the fire started in the engine due to some kind of mechanical malfunction". We doubt that this was said, or if it was said then the statement was misleading. It is doubtful that the Captain could specifically attribute the cause of the fire to a "mechanical" versus an electrical/electronic malfunction. It is more probable that this wording was being used loosely. However it under-scores the lack of importance given to documenting and studying the cause of such fires. Very often little more is done except that an insurance adjuster is notified and the insured is reimbursed for the loss. Rarely does anyone appreciate the importance of documenting the physical evidence and providing that information to Transport Canada (or NHTSA in the U.S.). While "Everybody was fine" in this particular instance, that may not be so in the future.

For example it might take a longer time for a baby strapped into a car seat in the back seat of a two-door vehicle to be removed. Or a collision might jam a door shut or a person's leg might become trapped by some deformed interior components. All these possibilities could create a situation where a person cannot escape a burning vehicle and may die. So it can be vitally important to pay attention to incidents where a vehicle has caught fire and to notify those persons responsible for monitoring the safe performance of vehicles on the road.

Political Interference In Traffic Safety Decisions In Sarnia Ontario

"Enough is enough" is how local Sarnia counsellor Jon McEachran was reported to have announced a decision to ask for traffic signals to be installed at the intersection of Murphy Road and Cathcart Boulevard in Sarnia, Ontario, Canada. This announcement was made after several days of news media articles regarding the death of 10-year-old Jillian Keck who was killed when she followed a crossing guard into the intersection and was struck by a passing vehicle.

A traffic study had been conducted at the intersection in October of 2012 and it was determined that a traffic signal was not warranted according to the standard methods used throughout the Province of Ontario to make such determinations. Not deterred, many residents continue to call for the installation of traffic signals and now politicians have followed suit.



When is it a green light for traffic signals?

Some of the conclusions from the October 2012 study were reported in several Sarnia Observer newspaper articles however we have argued that the full report should be made available so that those uninformed about the procedures can be properly educated before drawing their own conclusions. What were the exact traffic volume numbers? Were they close to the warrant threshold or well below? That is an important matter. Similar for the specific numbers of the other warrants, the devil is in the details, as specific knowledge about the numbers determined in the study should be the guide and not political pressure or a knee jerk reaction to a tragedy.

January 16, 2013

Woman Dies In Jeep Impact of Highway 400 Bridge

Little information is available however the Barrie Examiner Newspaper has reported that a Jeep crashed into a bridge in the northbound lanes of Highway 400 at Dunlop Street in Barrie, Ontario at approximately 0125 hours this morning, January 16, 2013. The Jeep reportedly rolled several times and then caught fire. Passersby pulled the woman from her vehicle but she was pronounced dead at hospital. The identity of the woman has not yet been released.

January 15, 2013

Latest Fatal Is Third Such Collision In Four Years On Adjala-Tecumseth Townline - Where Is The Accountability?

When major news media fail to report the true facts of relevance regarding a triple fatal crash, the small town newspapers of Simcoe.com step up and deliver. It is only this group that was able to produce a sufficient number of photos of the accident site on Adjala-Tecumseth Townline where three local teens lost their lives in a collision on Sunday, January 13, 2013, at a site located just south of Alliston, Ontario.

Simcoe.com were also the news group that published an article "Residents Call For Changes After Deadly Crash", possibly authored by "Maija Hoggett". This fine piece of reporting made some very obvious facts loud and clear. Two other fatal collisions occurred near the bridge where the present youths lost their lives. The article provided information about those two other collisions, one that occurred in 2009 where "...a 28-year-old man was killed in a single-vehicle crash at the concrete bridge..." and in 2011 "...a local soccer coach was killed in a single-vehicle crash just south of the 11th Line". Anyone reading these facts who knows anything about road safety and maintenance should be horrified.

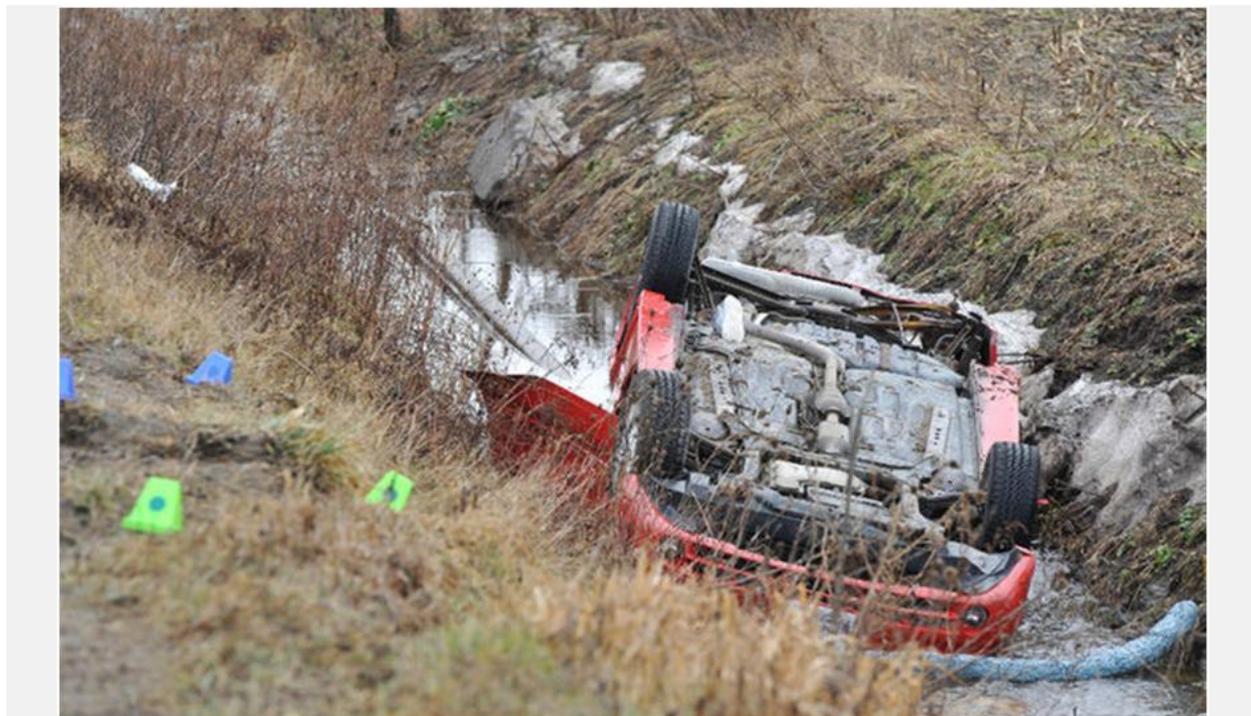
The additional photos shown in the Simcoe.com article show the position of the 2004 Grand Am with respect to the bridge. While the views are still sparse they suggest to us that the Grand Am was likely southbound and came to rest south of the bridge in the west ditch. These facts could have been reported by police and news media without jeopardizing any part of the investigation, but that was not done. The wheel missing from the vehicle would appear to be the right-rear. One of the site photos seems to show that the concrete bridge support on the west side of the bridge extends rather high and exposed to possible impact by the wheel of car as this area is totally unprotected by any guard-rail. If this concrete support was struck by the right front wheel of the Grand Am and it jugged up high enough from the surface of the road then it could cause the type of wheel separation that was observed. So is this what happened? Since photos were taken at the site someone could have determined if what we hypothesize is true. Was there no one capable of looking at this bridge and making such an observation?

Why is there no guardrail at this bridge when two other fatal collisions reportedly occurred here in such a short time? What is the Average Daily Traffic Volume (ADTV) of this road. If the ADTV is very low and thus insufficient to require a guardrail, why do we have three fatal collisions in this very vicinity? Why did no one observe the obvious danger posed by the steep-sided ditch and water filled creek? We hope the family and residents stop for a moment and demand answers to these disturbing questions. It would appear that police and many official media are unwilling to touch this controversy.

All that has been reported is the identity of the deceased youths. Dead are Justin Keogh, 18, of Wasaga Beach; Kevin Papps, 19, of Adjala-Tosorontio Township and Eric Jover, 20, of New Tecumseth.

January 14, 2013

Triple Fatal South of Alliston, Ontario - Will We Hear Any Answers?



Two questions: What caused the wheel separation and did the occupants drown?

It is not surprising that neither the official news media provided any real answers or that police likely did not give them. But the public has a right to know how all three occupants of a partially submerged car came to their deaths on Adjala-Tecumseth Townline in a single-vehicle collision that was reported on Sunday morning, January 13, 2013. The vehicle likely came to rest in a small creek, possibly near a bridge. This area has been photographed from a Google maps as shown below.



Aerial view of likely accident site taken from Google maps.

Although the image is poor because it was photographed from a computer screen, it shows a bridge but there is no indication of a guardrail that would normally attach to the bridge abutment. If the accident occurred at this location and there was no guardrail, there should be questions raised.

Furthermore, why is the right rear wheel of this vehicle torn off? That is not a common circumstance in a single vehicle collision.

Finally, the public should be made aware of whether the occupants drowned from being trapped in the upside down vehicle. While we are strong supporters of seat-belt use, we are also supporters of the public's right to be made aware of all the possible dangers that they could be exposed to, even when restrained by a seat-belt.

No safety device is a panacea but many official agencies like to keep the public in the dark when certain safety devices such as seat-belts and air bags fail to protect a life. We believe it does far more harm to lie to the public about such occurrences when they occur because the public's trust is lost. The public must have a realistic understanding that no safety device can save everyone in every circumstance and as difficult as it may be the best approach is to be fully honest about that fact.

UPDATE: JANUARY 15, 2013, 1120 HOURS

A photo of the accident site taken by Mark Wanzel of The Barrie Examiner shows a view of the accident site and the small bridge with the unprotected concrete abutments and no guardrails (shown below).



View of accident site taken by Mark Wanzel of The Barrie Examiner newspaper

The above photo clearly shows that the vehicle fell into the creek at the bridge. The question remains, why was there no guardrail next to the bridge as the drop to the creek bed looks to be considerable? Often the "level of service" provided on a roadway is based on the traffic volume. However we can see that the roadway contains a hard surface, possibly asphalt pavement and it contains a yellow centre line. We also know that it is a short distance from the town of Alliston, Ontario. So all these factors would suggest that this road is not just local, but may be a collector road that does more than service the local residents. So the police should be asking, or at least documenting the fact that the roadway may have been deficient in terms of lacking a guard rail, especially at a location where a vehicle exiting the road could easily rollover on the steep embankment and the presence of water could prove disastrous for occupants of an overturned vehicle.

So will these facts reach the public?

London Ontario Less Drunk Than Most



In a strange twist of statistical fact local news media have reported that alcohol involvement in motor vehicle collisions has increased in 2011 across Ontario and Canada but that, magically, it has declined greatly in City of London, Ontario. In fact the number of people charged with drinking and driving in London reportedly dropped 52% in the last 10 years.

This is when the grumpy, old uncle on the poofy couch raises his cane and declares "That just goes to show why these damned statistics were invented: They needed some scientific-looking concoction to make their lies".

Well, we believe statistics can be what we want them to be. If we are looking for the truth and know where it can be found, statistical methods will help us get there faster. Alternatively, if we are looking to lie, and know how to disguise it, statistics will also help us get there...and faster. There was a poet who once said "Candy is dandy but liquor is quicker".



Not all driver impairment is based on alcohol.

"Warm" Temperatures Bring Good Driving and Pedestrian Walking Conditions



A Monday morning in mid-January in London, Ontario, Canada without snow is a blessing.

Depending on one's latitude the cup could be half empty or full, but in Southern Ontario any temperature that is above zero degrees Celsius makes the cup very much full. Last winter was extremely mild however London still suffered several days of deep snow cover. This morning we saw pedestrians walking on bare pavement.



Pedestrians in downtown London, Ontario, Canada, on the morning of January 14, 2013

And those who are of limited motion could find bare sidewalks and freedom.



Scoter rider enjoys freedom of bare sidewalks in London, Ontario, Canada as recent warm temperatures temporarily melted all the snow.

But that additional freedom sometimes means that we break the traffic rules.



Pedestrians crossing against the traffic signal on busy streets in central London, Ontario, Canada.

Good weather conditions do not always mean a safer road. In many instances we seem to increase our risk-taking in the belief that we can get away with it.

January 13, 2013

Fatal Collision Reported on Blenheim Road (Oxford County Road 3) North-East of Woodstock Ontario

An unidentified male driver was killed and his right front passenger sustained non-life-threatening injuries after their northbound pick-up truck left the surface of Blenheim Road (Oxford County Road 3), struck a hydro pole and then struck a tree. The collision reportedly occurred at approximately 1530 hours on Saturday, January 12th, 2013. No further details have been released at this time.

The collision site is located between Oxford Road 8 to the north and Township Road 12 to the south. This roadway is generally straight but contains an unprotected concrete bridge abutment just south of Oxford Road 8 (just south of Washington) due to a small creek passing through the area. Such a creek normally creates a sag in a roadway where vehicles may encounter problems. Images from Google Maps from 2009 shows that portions of the roadway surface were freshly paved thus some surface problems were corrected at that time while other portions of the surface were left untreated. It remains to be seen whether any of these characteristics could have been factors in the crash. Pick-up trucks are generally more prone to loss-of-control events than typical passenger cars.

UPDATE: JANUARY 14, 2014, 1630 HOURS

The deceased in this unfortunate accident has been identified as John Vankruistum, 53, of Burford, Ontario, which is a town quite close to the accident location. No further details have been released about the incident, only that police are still investigating.

Chatham Police Conducting On-Site Reconstruction of Fatal Collision Involving Perry Molema

The Chatham Daily News newspaper has reported that the City's Police Traffic Management Unit closed access to Grand River West on Saturday morning, January 12th, 2013, in order to conduct a re-enactment of the "perspectives" of both drivers involved in a December 20th, 2012 collision between two vehicles where the driver of a left-turning car, Perry Molema, sustained fatal injuries. The re-enactment reportedly involved driving similar vehicles at varying speeds and positions on the roadway. Sergeant Mick Thompson, head of the Traffic Management Unit reportedly stated that on-site re-enactments like this were not unusual and "It's a typical aspect of an investigation as we try to re-enact a collision".

Vicki Gough, the Chatham Daily News reporter who wrote the article on this issue, reported that the original collision occurred at approximately 1537 hours while the police testing was being performed at 0730 hours. This would appear to be a valid point since Sergeant Thompson indicated that the primary issue in the testing was to determine "where and when both drivers could have or should have seen a potential hazard". A very important factor to consider in such analyses is whether the test conditions are reasonably similar to the crash conditions.

A crash resulting in the impact of the right side of a left-turning vehicle where the driver of that vehicle is killed generally suggests that the collision had to be of considerable severity and therefore the speed of the on-coming pick-up truck would appear to be the focus of the police investigation. Grand Avenue West in the area of the collision is a built up area of the City that would normally have a speed limit of about 50 km/h and therefore impacts of vehicles travelling within that range of speed should not normally result in fatal injuries to an occupant located on the far side of the side-impacted vehicle.

January 11, 2013

Concern For Death of Jillian Keck But Report of Intersection Evaluation Results Kept Secret

In a scenario that appears typical of keeping the public in the dark, Sarnia police and local news media fail to reveal the results of an intersection evaluation even though the

death of 10-year-old Jillian Keck continues to draw news stories (and readers/viewers to the news outlets).

Keck was killed in a traffic accident on January 7, 2013, at the intersection of Cathcart and Murphy Road in Sarnia, Ontario. The girl had been crossing the road accompanied by a crossing guard when she was struck by a vehicle driven by an unidentified 79-year-old female driver. News outlets have reported that the intersection was the subject of Sarnia's review for a possible traffic signal in October of 2012.

It would seem that the results of that study would be of relevance to the current discussion, but that report is not available to the public. Instead, news media are stirring up hysteria in regular reports about the accident and the opinions that local residents have about the intersection's safety. News media have also reported that Sarnia police closed the intersection on the afternoon of January 9th to conduct a "re-enactment" of the crash, but no explanation was provided why such a re-enactment was necessary. A decision whether to lay charges against the elderly driver who struck the child is typically made based on simple calculations of time, distance and speed, along with information about the available sight lines. Since a charge stemming from such incidents might lead, at most, to a charge of careless driving, the expenditure of police resources to conduct whole-scale "re-enactments" is normally not deemed a efficient use of police resources.

Rather than stirring the pot with police re-enactments and people's opinions, the proper approach should have been to educate the public about what technical analysis was conducted to determine whether a traffic signal was necessary. Initially this would mean that the City of Sarnia should have documents such as the October 2012 study available to the public and the news media. Otherwise, uninformed concerns develop a lynch mob mentality where logic and reason become secondary. Alternatively, actual evaluation of the study results could indicate some fault in the analysis that could determine at a traffic signal, or some other form of intervention is needed.

In recent years the Ontario Ministry of Transportation has been developing a set of Traffic Manuals that cover a wide range of traffic standards and guidelines. These standards and guidelines are fairly similar throughout North America but it seems that each jurisdiction must spend money on developing their own specific documents rather than referring to broader ones from national organizations that already exist.

Never-the-less one of Ontario's Traffic Manuals, Book 12, Traffic Signals (2012 edition), is available on-line on the Ontario Ministry of Transportation website. This 206 page document provides all the information you could possibly wish to know about how traffic signal issues are dealt with in the province. In section 4, Planning and Justification, the manual discusses the various "justifications", or warrants, that are used to determine whether a traffic signal system should be installed at an intersection. Under this section seven justifications are listed as follows:

1. Minimum Vehicle Volume
2. Delay to Cross Traffic
3. Volume/Delay Combination
4. Minimum Four-Hour Vehicle Volume
5. Collision Experience
6. Pedestrian Volume and Delay
7. Projected Volumes

These are the issues that the public and news media need to focus on before raising hysteria about the safety of the intersection. And the City of Sarnia must have data on these issues contained in the October, 2012 study. So where is the pressure to release the content of the report? It is unlikely that the public is aware of these matters but what are the news media doing to properly inform the public? Part of a free news media implies that they also have a responsibility to inform and educate. Why is the City of Sarnia not making such reports and documents available to the public? The City's actions are actually no different than many others in the Province of Ontario. The availability of the internet means that such documents should be made available to the public and to others such as ourselves so that independent, third party comment can be made that is not tied to concerns about law suits or possible inappropriate decisions made by City staff or politicians. A properly informed and educated public means that they are better able to apply pressure to their politicians where it is appropriately needed, and not because someone had raised unnecessary hysteria.

January 5, 2013

Our Reasons Why We Support "Black Boxes" and Traffic Cameras

There are reasonable arguments why many persons would be suspicious of equipping our society with more snooping devices such as event data recorders ("Black Boxes") and traffic cameras. Although they can be of benefit when used properly there are enough examples where those responsible for our privacy simply cannot be trusted. Yet, above this, we still believe these devices would be an overall benefit. The following is an example scenario that recurs regularly in Ontario.

In a recent court judgment a female driver was given a maximum penalty for making an unsafe left turn which resulted in a collision that caused the other vehicle, a Honda Civic, to be deflected into a female pedestrian who was killed. A witness to the event claimed that the Honda driver was speeding but that did not deter the court from

claiming that the "onus was high" on the defendant to make sure that her turn was made in safety. Unfortunately our experience is that traffic court frequently does not obtain a reasonable understanding of a collision because the quality of the investigation and analysis is less than adequate.

We know full well that many drivers do not take proper precautions when they approach an intersection where their traffic signal is green.

A frequent problem is that drivers fail to understand that the gap that they leave between themselves and the car ahead plays an important role in intersection collisions. While drivers understand that they should not "tail-gate" they do not understand that leaving a gap of say, 10 car lengths, from the vehicle ahead causes problems for left turning drivers. Some reckless drivers take chances in the belief that they can complete a left turn in the minimal gap. But others simply cannot detect that the gap is only ten car lengths because of various factors such as view obstructions. Leaving an improper gap with the vehicle ahead is dangerous for this reason. When such a gap is unavoidable drivers must be taught to be especially alert and to expect that a left turn may occur in front of them. But the reality is that this issue is rarely, if ever, addressed in any driver training.

Another common action is for drivers to increase their speed upon approaching a green traffic signal because they believe that the light might turn amber and force them to stop. Again, another very dangerous action but one which is difficult to detect in a typical accident reconstruction. The left turning driver may have examined the gap and determined it was safe to turn but after commencing the left turn they find that the gap has been reduced substantially because the driver of the following vehicle has sped up. This is particularly dangerous because research indicates that, as a left-turning driver, you will have difficulty detecting the speed of approaching traffic at longer distances and it is particularly more difficult to detect that an approaching vehicle has increased its speed.

Finally, we know full well that when it comes to putting all the pieces back together again and resolving what occurred police have difficulty in calculating a sufficiently narrow range of speed of a speeding vehicle that will stand up in court. Although it is not admitted, this is why the official position of most traffic laws is that the onus is on the left-turning driver to ensure a turn can be made in safety, while in reality it is the speeding driver who is often most responsible for these collision consequences. This is an unfair circumstance but it has been the reality for many decades until just recently.

By this year almost every newly manufactured light vehicle in North America will be equipped with an event data recorder (EDR), or "Black Box". Unlike the horror stories that are sometimes passed on, these EDRs do not snoop on every aspect of your driving, they do not document that you are munching on your Big Mac, that you are thinking about last week's dinner, or that you failed to remove all the snow off your windshield. EDRs simply record your vehicle's action/condition in the very narrow time around a

significant event such as a crash. In a vast majority of scenarios they are extremely accurate in doing so, much more accurate than your local Sheriff. The result is that, when a collision occurs the EDRs information is much more reliable than any driver or witness. For the scenario of a left-turn crash the EDR will report the exact speed that the speeder was travelling for several seconds before the crash. As a reckless speeder you may not want to hear that, but for someone who has been charged with making an unsafe left turn the results can actually deliver the proper justice that you deserve.

We also understand the distrust that surrounds traffic cameras and those who wish install them. In most instances much of this distrust could be alleviated if the functioning of these systems were made fully available to be seen by the general public. Until that time even we are suspicious of those who would request them but fail to provide proper assurances that they will be used according to the wishes of all of society.

Yet, we also see the great benefits that this technology can provide. We see that injustices are so prevalent in traffic courts that traffic cameras can make a large difference in balancing those scales of justice. When operated as they should they can take away the advantages that so many unscrupulous members of our society presently have by presenting evidence to the court that is devoid of bias, prejudice, discrimination and incompetence. To us this outweighs the new invasions of privacy that they may bring. For all those drivers who have been unfairly treated by a half-blind and stumbling judicial system we truly hope that objective evidence will prevail by way of these new technologies.

January 4, 2013

Variable Road Surface Conditions Catch Some Drivers By Surprise in South-Western Ontario

It was a mostly sunny day in South-Western Ontario with roads mainly bare and damp. But the devil is in the details as those road conditions were also variable and caught many drivers by surprise. Strong winds blowing throughout the region resulted in periodic white-outs and sudden localized areas of snow blown onto the road. These conditions were just ripe to place dozy drivers into a sense of complacency...and sudden danger.

We caught one incident earlier this morning on Highway 19 just north of Tillsonburg, Ontario where the roadway appeared to be bare and pleasant as demonstrated by the southbound view along Highway 19 below.



Southbound view along Highway 19 just north of Tillsonburg, Ontario on the morning of January 4, 2013

Just as we passed over the railway tracks at Ostrander the road conditions suddenly changed as shown the photo below.



View of sudden snow drifting onto the Highway in the distance and a tractor trailer jackknifed on the left (east) ditch.

Snow had drifted onto the roadway and we could see that a tractor-trailer had jackknifed into the east roadside as shown in the photo below.



View of jackknifed tractor trailer in the east ditch.

It was likely that the truck driver was caught by surprise by the drifted snow and lost control of the rig. Luckily there was no other traffic in the on-coming lane and no one was injured. But the scenario could have been much worse. This is the kind of day it was in South-Western Ontario and it is a regular occurrence in winter months. Road conditions that appear to be excellent suddenly turn wicked and treacherous.



Northward view of tractor trailer shows that the road conditions just south of the truck's rest positions were pleasant and bare once again.

The irony is that, just south of the truck's rest position the road surface returned to its pleasant, bare condition. It was this kind of variable situation that awaited the unaware driver on this seemingly wonderful winter day.

Lack of Information On Traffic Fatality Re-Affirms That Police And Official News Media Are Working Hard At Keeping Public In The Dark

While we appreciate that some circumstances require that the public not be made aware of how or why a fatality occurred, the democratic society that differentiates us from various totalitarian regimes is that we try, as best we can, to keep the public informed on all important matters because this is what keeps our society healthy and functioning properly. Unnecessary secrecy is more than unnecessary, it is un-democratic. That is why we express our criticism regarding the lack of information regarding the latest fatality that occurred yesterday afternoon on Oxford County Road 13, south of Springford, Ontario.

It was reported that yesterday, around 1230 hours, a northbound van transporting five occupants came into a "head-on" collision with a southbound Jeep transporting two occupants. It was reported that the driver of the van sustained fatal injuries while all others received minor injuries or were uninjured. The only additional information from the investigation was that the identity of the deceased, Clifford Dietz of Tillsonburg, Ontario was released.

It is noteworthy that all news media showed the same photograph of the collision site, apparently taken by Tillsonburg News reporter Kristine Jean, showing a very long distance, tele-photo-lens view of the accident site with the involved vehicles represented as something just larger than mere dots in the background. Apparently, either no reporter was allowed access to a closer photo or no one thought that this would be important.

Certainly the privacy of family and friends are an important matter and there is reason to be discrete. But there is also an important matter of demonstration that official investigations are performed properly so that the public is not left puzzled or questioning why something did or did not occur. In the present case, there are certainly puzzling questions that are left behind, not because we believe there was anything improper, but because police and news media seem to have worked hard at releasing so little information.

A head-on collision on a rural highway almost invariably implies a high-severity crash in that the velocities of the vehicles are changed in a very short time. This is a high probability because almost all light vehicles on the road have had a substantial amount of engineering built into their front ends to manage the large amount of kinetic energy that must be dissipated in order to protect the occupants. Even though this engineering has been very successful, head-on collisions remain dangerous because of that rapid change-in-velocity. So when a driver is killed in a head-on collision there is a high probability that this would require a high change-in-velocity.

But evidence of a high change-in-velocity is also demonstrated in other evidence in a crash. One way of confirming that this was a high severity crash is to review the descriptions of the injuries to all the occupants involved. In a high severity crash where there are many occupants, they generally experience a similar crash severity and therefore we should expect to see a number of occupants with similar severities of injury. But that is not what has been reported in the present circumstance. Recall that, beyond the fatally injured driver, all the other occupants sustained minor injuries or were uninjured. That should be a red flag. Although it is not unheard of, it begs an explanation. It would suggest that the fatality occurred from a source other than the high severity of the crash. But that should not be left unexplained.

We can also evaluate the severity of the crash by examining the extent of damage to the vehicles. But we cannot do that. As indicated, the only photo of the vehicles was from a very long distance and from an angle that did not show the primary areas of direct contact. We are not so naive to believe that this was done un-intentionally as it is a regular occurrence in news reports. Even so, a person who has some experience in examining damage from severe head-on collisions can decipher some of the evidence even when it is so deliberately hidden. The lack of damage to certain portions of a vehicle in a head-on collision can also be a telling indicator of what could have taken place. The fact that the photograph of the van showed its undamaged rear end and right side suggests that the damage was likely to the front and left of the vehicle. We also

know that severe head-on collisions generally involve direct contact to the left of the front ends of the involved vehicles. So this further solidifies our suspicions.

We are also told that the van was travelling northbound yet, we can see in the photo that it is pointing generally in a southbound direction. An impact to the left-front of a vehicle will often involve a rotation up to 180 degrees so this is also not in disagreement with our beliefs. Unfortunately, because the collision occurred on a curve, and because of the telephoto nature of the photo, it is difficult to get an appreciation of where the vehicles are located with respect to the road edges and with respect to each other. The Jeep appears to be positioned an unusually long lateral distance away from the van although this appearance may be due to the distortion from the photo. It certainly would have done no harm had a photo or two been taken closer to the vehicles so that some of these facts would be better understood.

Despite comments made by official investigators, errors exist in official investigations in a sufficient number of instances that a minimum amount of information should be shared with the public so that independent entities such as ourselves can comment on the appropriateness of what is being fed for public consumption. There could be a number of explanations why the driver of the van sustained fatal injuries, and in some circumstances it is important that the public be made aware, but when so little information is shared there are questions that remain un-satisfactorily unanswered.

January 3, 2013

London Free Press Is Reporting A Fatal Collision On Oxford County Road 13

The London Free Press is reporting that a fatal collision has occurred on Oxford County Road 13 near Cornell Road. They indicate that no further details are available at this time but that the road is closed to traffic at this time. The LFP report was filed at 1440 hours so it is likely that the road will be closed until at least sunset unless the collision occurred overnight.

UPDATE: January 3, 2013; 1720 hours

The Woodstock Sentinel Newspaper is reporting that a northbound Jeep collided with a southbound van at approximately 1230 hours today. A man in the van has sustained fatal injuries and seven other adults were taken to local hospitals with minor injuries. County Road 13 and Ninth Road between Zenda Line and Middletown Line remain closed as police continue their investigation.

Closer examination of an on-site photo would suggest that the vehicle rest positions are on Oxford County Road 13 very close to the intersection with Ninth Road.

UPDATE: January 4, 2013; 1855 Hours

We have no information about the conditions of the site at the time of the collision however, our visit earlier this morning or about 11 hours after the collision revealed that snow was blowing across Oxford County Road 13 making visibility quite difficult. The two photos below show a view looking north from just south of the intersection with Ninth Road and this is approximately where the fatal head-on collision occurred.



Accident site at approximately 1115 hours on January 4, 2013 - Blowing snow made visibility difficult



Another northbound view of accident site on Oxford County Road 13.

Is Your Driver A Monster In Disguise?



Can I Give You A Lift?

Too often we take it for granted that the driver we accompany on a journey will act responsibly and not take risks with their life and ours. We have prepared a short article on the Articles page of this website to warn the public to evaluate the character of a driver before accepting a ride that could be our last.

January 2, 2013

Pendleton Oregon Bus Crash - Official Media Fail To Focus On Cause

While there should be a reasonable amount of focus on the death of nine of the 48 occupants of the bus which crashed on Interstate 84 east of Pendleton Oregon on December 30, 2012, the cause of the crash appears to be ignored by official news media.

A single photo of the portion of the guardrail where the bus exited the highway and plunged 200 feet down to the bottom of a ravine, showed that the rail was totally inadequate for the redirection of any vehicle larger than a typical passenger car or light truck. While there is a reasonable argument that it could be very expensive to install barriers to deflect larger vehicles such as intercity buses and trucks, there needs to be a

discussion of the dangers that exist, particularly for occupants of large, buses that could potentially endanger the lives of many persons in a single collision.

Equally, there has been no discussion in the official news media regarding the fact that the bus was in the passing lane and initially came into contact with the concrete barrier in the median of the highway before veering off to the right and contacting the guardrail. Was the road surface icy? That is a critical point but it is also a controversial one that is often avoided by those investigating the crash.

A concrete Jersey-type barrier is designed to cause impacting vehicles to hug the barrier to prevent defection into traffic, but that may not always be possible. But did the official news media take any photos of the concrete barrier in the median so that the public could be appraised of the contact evidence? As usual the answer is no, even though that barrier would have been easily more accessible than the area around the final rest position of the bus where all the focus was drawn. It is this apparent lack of knowledge or understanding of what is important that makes many of these official news items of minimal value except to sensationalize and draw readers to the news item. A properly investigated and knowledgeable news story could draw more legitimate readers than the news editors are prepared to recognize.

January 1, 2013

Improperly Worn Seat-Belts In Winter Conditions Can Be Deadly

We do not pay enough attention to the danger of wearing seat-belts improperly during the winter. In Canada cold winters require that heavy coats be worn during the winter months. When persons enter a vehicle they often do not understand the danger they place themselves in when they do not take the time to properly position their seat-belts while wearing heavy coats. The photo below is an example of a larger, male, right-front passenger who put on his seat-belt over top of his coat.



Placing a lap belt over top of a heavy coat means that there will be excessive slack in the system and during a major crash the lap belt can rupture major abdominal organs, sometimes resulting in death.

The lap belt in the above photo is obviously out of position as it is vastly too high, riding way up on this passenger's abdomen. Because the webbing has to cross over top of the thick coat the restraint system will also contain far too much slack to be of any benefit in a serious crash. More importantly this seat belt orientation may cause more injury than if the passenger was not wearing a seat-belt at all.

In winter persons must get used to the habit of un-zipping their heavy coats and pulling the coat to the left and right sides of the body while pulling the seat-belt tight and making sure that the lap belt is riding below the pelvic bones (iliac crests). Failure to do so will cause the lap belt to penetrate into the soft and unprotected abdomen where there are major organs (intestines, liver, spleen, etc) that, when ruptured can lead to critical level injuries.

So take the time out this winter to be safe. If you check your tires, windshield wipers and all those other safety features, remember to also check to make sure that you and your passengers are wearing your seat-belts properly before you head out on your winter journey.

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