

# Gorski Consulting Website

## Archived News - 2013 - March

**March 30, 2013**

### **Another Fatality of Young Teenager Trapped in Submerged Vehicle in Toronto**

We have described a number of collisions recently where a group of teenagers are in a vehicle that exits a roadway and their vehicle has been submerged in water resulting in multiple drownings. Six fatalities in Warren, Ohio; three fatalities in Alliston, Ontario, two fatalities on Highway 401 at the Nith River (but not teenagers), and so on. In the most recent incident in Toronto, Ontario there were five occupants in an Acura SUV that plunged into the Don River (Keating Channel) on Friday, March 29th, 2013. One of the teenagers was not able to get out of the vehicle and drowned.

In many of such instances the official news media, police, local politicians or persons responsible for the roadway maintenance have tried to downplay the role of roadway roadside protections that should be in place to prevent a vehicle from entering a waterway. While each case is unique and the comments may be reasonable in the present case, we are suspicious when police are quoted as saying "It's a handrail, not designed to stop a vehicle" (quote attributed to Sgt. Lawrence Zimmerman).

Ok, there indeed might be a hand rail, but why does it exist between a roadway and the water hazard instead of a guardrail or other barrier that should be designed to stop vehicles from entering such a hazard? It is as if no one understands that there are standards for roadway design, maintenance and signage. While we have been very complimentary of the Toronto Star newspaper in its unique tenacity of investigative journalism it appears even it has failed to inform the public as to why this fatality had to occur while not investigating whether the police explanation makes any sense.

We agree that individual circumstances can be complicated and a full explanation may clarify that there was nothing improper here. But we await the explanation. What is the explanation? How does a teenager die in a modern, advanced city like Toronto without an explanation why the vehicle was allowed to pass through a "handrail" instead of a guardrail?

Given the Toronto Star's previous stellar performance in investigative journalism we will refrain our criticism. But without an explanation, we truly feel sympathy for the family

and friends of this young, lost person, as we do for all the other families and friends of persons who have passed away without a proper explanation in the several similar incidents we have described in the last several months.

### **Aftermath of Single Vehicle Collision on Commissioners Road in London, Ontario**

When police finally re-opened Commissioners Road on Friday afternoon, March 29, 2013 there was still little information about the crash that took place just west of Old Victoria Road sometime in the early morning hours. A photograph of a damaged Honda Accord was shown in the London Free Press but the accompanying article was more about police conducting a weekend safety blitz rather than any specific information about the incident.

Gorski Consulting attended the site this morning, March 30, 2013 and it became apparent that the involved eastbound vehicle had to be travelling at a very fast speed when the driver lost control at the top of a hill which also contained a left curve. Below is a photo taken from several hundred metres west of the vehicle's final rest position, looking east, to the curve and downgrade where the driver lost control.



View, looking east on Commissioners Road to the left curve and downgrade where the Honda Accord driver lost control of his speeding vehicle.

The photo below shows another eastward view partway through the left curve. The Accord eventually travelled onto the right (south) roadside in the background.



View, looking east, parkway through the left curve of Commissioners Road. The Accord left the roadway to the right (south) in the background.

The first yaw tire marks were visible on the roadway centre-line at a location when the vehicle was already at an advanced stage of rotation. The photo below looks back westward along the curve from the location of a driveway in the foreground where the vehicle travelled off the road surface.



View, looking westward from a driveway where fresh yaw marks can be seen in the gravel shoulder in the foreground from the Accord as it approached the camera.

In the above photo we have placed a measurement wheel on the south (left) shoulder across from the point where the first visible yaw marks were observed at the roadway centreline. Using this location as a "Zero" reference we measured the Accord's path to its final rest position. As the vehicle was already at an advanced stage of rotation at this location it means that it had to be losing speed for a substantial distance before producing this first visible evidence. From this first visible yaw mark the Accord travelled about 83 metres through a lawn where it just grazed the stump of a large maple tree, as shown in the photo below.



View, looking south-east from the driveway, toward the south roadside where the loss-of-control tire marks are visible on the lawn. Note how the tire marks just graze the stem of a large maple tree in the background.

The position of our measurement wheel in the above photo is 43 metres east of its original position across from the start of the yaw marks at the roadway centre-line. After grazing the noted maple tree the Accord travelled an additional 30 metres before striking a row of smaller cedar trees, as shown in the photo below.



View, looking southeast, toward the final rest position of the Accord against a row of cedar trees. These cedars were located about 112 metres from the yaw marks that were first visible on the roadway centreline.

Several of these cedar trees were knocked over indicating that the vehicle had to be travelling at significant speed at that location even after decelerating over the previous 112 metres of visible evidence. The photo below shows a view looking back along the path of the Accord from its final rest position at the row of cedars.



View, looking north-west, from the final rest position of the Accord, along its travel path from the roadway in the background. The markings in foreground are from repair work undertaken after the crash.

Clearly this vehicle had to be travelling much faster than the 80 km/h speed limit when its driver encountered his original difficulties.

### **March 29, 2013**

A serious single vehicle collision has occurred on Commissioners Road between Jackson Road and Old Victoria Road in south-east London, Ontario, likely earlier this morning. Police still have the roadway blocked as of 1330 hours this afternoon (March 29th) and no further details are yet available.



View, looking west, from the intersection of Commissioners Road and Hamilton Road at accident site in the distant background of Commissioners Road.

**March 27, 2013**

### **Kachkar Not Criminally Responsible for Sgt Russell's Death - But Are We All Partly At Fault?**

We saw no opportunity for anything positive to come from the verdict whether Richard Kachkar should be found guilty of first-degree murder in killing Toronto Police Sergeant Ryan Russell when Kachkar crashed his snow-plow into Russell on a Toronto Street on January 12, 2011. Today's finding that Kachkar was not criminally responsible due to being in a psychotic state is no help or closure to Russell's family, the police community, or any segment of society. It solves nothing.

When persons with a mental illness do not receive our proper attention and help but are let out on our streets to fend for themselves what can we expect to happen? Police are not psychologists or psychiatrists. They cannot identify a person's mental illness, they cannot provide proper counselling, they cannot provide proper medication. We all know what police are trained for, and it is not to deal with the mentally ill.

We must come to grips with the fact that a snow plow, or any truck or automobile can be a very large weapon. In the wrong hands its driver can deliver lethal injuries to as many people, if not more, than someone with many guns. And this was demonstrated in Kachkar's reckless drive through the streets of Toronto, causing destruction everywhere. It would appear fortunate that no other persons were also killed.

What can police do when there is a psychotic driver driving a rather large pick-up truck equipped with a solid plow through the streets and threatening the lives of so many people. Apparently, at some point, Sergeant Russull pulled out his revolver and shot a few rounds at the truck before he was struck. But what else could he do? Allow the rampage to continue? Events like these place officers in very dangerous conditions as they are the only defense the public has.

But we, all of us, knew of the cut backs in hospitalization and treatment that have taken place in recent years. We listened to those who told us there were cost savings if we dispersed the mentally ill "to integrate into the community" rather than paying for large expensive institutions. We all took this in silence and apathy. Little thought was given to the nightmare that the mentally ill must live within their minds and how difficult this can be to face on the street alone. With little help these unfortunates blend into the background like the wind-blown hedges of our streets, with little thought on our part until a tragedy strikes the headlines.

We all have to accept responsibility for Sergeant Russell's death, but we also have an opportunity to wake up, to evaluate what should and should not be done, and take positive action to help all the Kachkars and Russells that need our help and support.

**March 26, 2013**

### **Collision Investigation Involving Sergeant Roger Woods Leaves Unanswered Questions**

The repercussions of police misconduct are far reaching and long-lasting. We know that from our personal experience of being involved in defending an elderly citizen a number of years ago whose vehicle was struck by an unmarked OPP police cruiser. We observed how everything improper was done by essentially everyone involved to prevent the truth from being revealed so as to protect the at-fault officer. While that officer got off without a charge, and that elderly citizen had to pay a fine, for us the repercussions from that knowledge will continue, and presently do continue. Therefore when we read today's headlines regarding a charge against a local OPP Sergeant we no longer look at the incident with a naive eye.

It has been reported that on November 14, 2011 OPP Sergeant Roger Woods' 2011 Ford Edge SUV struck a horse-drawn Mennonite buggy causing serious injuries to its driver, Onias Frey. An OPP "accident scene analyst" reportedly testified that Woods' vehicle "...was travelling at least 80 km/hr at the time of impact, but may have been going as

fast as 104 km/hr" in the 50 km/hr posted speed zone. Woods was fined \$500, given 18-months probation and required to conduct 24-hours of community service.

One of our observations from the news article was the uncommon approach of the prosecutor who heaped words of praise about the Sergeant's commendable behaviour after the crash occurred. The reality might be exactly what was stated, that this Sergeant was of exceptional calibre who happened to make a mistake that anyone can make. But this also reminded us of the earlier trial discussed above where the facts were twisted to protect the officer involved. These are the far-reaching repercussions of the previous incident.

Another observation was the curious evidence provided by the unidentified OPP collision analyst. The evidence was that Sergeant Woods' Ford Edge SUV was travelling "at least 80 km/h and could be going as fast as 104 km/hr". That reported evidence caught our attention because of the range that was reported and because of the type of vehicle involved. The reported range is something that would come from the police analyst's calculations of speed from the evidence at the collision scene. Information such as travel distances, rates of deceleration, collision severity, and angles of departure/approach are used to estimate an impact speed. However, since such evidence has an uncertainty then the police analyst has to report the conclusions within that range of probability.

However, a 2011 Ford Edge SUV comes equipped with an event data recorder (EDR) or "Black Box" which provides very precise data for several seconds before impact and a short time after impact. One of these data includes the travel speed of the vehicle. That EDR does not report speed in ranges of 80 to 104 km/hr., it reports it precisely as it was retrieved from the vehicle's onboard sensors. Thus if the data was recorded it should have been available for download by the OPP analyst. So where is this precise speed?

One argument might be that the EDR did not "wake up" and record anything because the impact was not severe enough or that the air bag did not deploy. Such an argument would not hold. A change-in-velocity of up to 5 mph would be the highest wherein there could be no data. However the collision facts clearly indicate that the collision severity should have been higher than that threshold. So we find that argument unacceptable. So we say again: Where is the EDR data?

In all fairness, having one's name splashed about in various media with speculations swirling about one's actions is not pleasant. And when nothing improper was done it becomes quite unfair. However it is also unfair when innocent drivers are charged even though it is the police who are at fault. The repercussions are that we do not believe that the actions of police are beyond reproach like we once did. When we see these unusual facts emerge we now view them with suspicion. And that can affect good citizens like Sergeant Woods. Because the inappropriate actions of other members of his force cast a shadow on his good reputation and the reputation of many good police officers in the field.

**March 25, 2013**

## **Filming of Horror Collision on Highbury Ave Not Missed - We Just Ignored the Propaganda**

In case anyone wondered, we have not commented on the filming of a "horror flick" collision on Highbury Avenue in London, Ontario this week with good reason. In our 32 years of seeing the horror of real-life collisions it seems ironic that a make-believe movie scenario could attract more publicity than the real-life issues that need the public's attention. If your desire is entertainment then so be it, however the purpose of our website is more sobering.

## **Ah Spring - Home of Warm Breezes, Birds, Flowers...and Sudden Extreme Snow Storms**



Sudden snow storm during morning rush hour caught most Londoners by surprise.

Most Londoners would find it hard to believe that a year ago the City was basking in temperatures reaching 27 degrees Celsius. The reality was even more painful as they just

came back from "March Break" in Florida or some southern islands, only to find a sudden unexpected snow storm during Monday morning's rush hour.

Such was the case on Monday morning, March 25, 2013 around the vicinity of London, Ontario, as an early spring snow storm made driving treacherous over the morning rush hour.



Snow plows were ready to sweep pedestrians off the crosswalks as they wandered through to clean local sidewalks.

Problems that one would not expect happen when you least expect them. Take for instance the travel of the transport truck and trailer in the photo below that contained a quantity of loose snow on the roof of the trailer.



Car travelling next to truck and trailer just before it receives a sudden downpour of loose snow from an unexpected source.

**Strong and unpredictable winds threw the loose snow off the top of the trailer and into the path of a car passing the truck as shown in the photo below.**



In an act reminiscent of Houdini a sudden avalanche of snow from the truck trailer makes the nearby car "disappear".

Such are some of the conditions that drivers in Ontario must face during early "spring".

**March 24, 2013**

### **Expressions of Sympathy And Support Are Fine - But Cause of Two Tillsonburg Ontario Fatalities Needs Discussion**

While we continue to support those who express their sympathies to the families and friends of two young Tillsonburg, Ontario women, we also attempt to focus the public on the factors that could have prevented this tragedy.

It has been reported that Megan Lofthouse, 19, and Brittany Wardle, 21, were both killed in a single vehicle collision on La Salette Road in Norfolk County, March 23, 2013 at approximately 2150 hours. Their eastbound vehicle went out of control while it entered a roadway sag at a creek causing the vehicle to exit the north roadside and collide with a tree.

We examined the site this afternoon (March 24, 2013) and have observed the evidence on the roadway while it was still not destroyed. Photos and further details may be forthcoming shortly but we want to highlight the fact that this sag in the road should

have contained a guardrail at the point where the crash occurred. The downgrade of the roadway leading into the sag was significant. The drop from the road surface to the location of the creek was also significant. Both factors should have led to the warranting of a guardrail that was not present. The presence of a guardrail would likely have saved the lives of these two young women. Beyond the sympathies being expressed, this is the fact that needs to be discussed.

UPDATE: MARCH 25, 2013; 1405 HOURS

An article discussing the site examination by Gorski Consulting has now been uploaded to the articles page of this website.

**March 23, 2013**

### **Triple Fatality Prompts Gorski Consulting to Conduct a Roadway Assessment South of Alliston, Ontario, Canada**

We became aware of a collision that occurred on January 12th, 2013 just south of Alliston, Ontario where a car came to rest in a water-filled ditch and the three young male occupants died. Concerns were raised to us by local residents and family members about the conditions of the road and whether they were the primary factor leading to this consequence.



View of lack of guardrail and water-filled ditch where three persons died when their vehicle came to rest upside down in the ditch.

When another serious collision occurred there on February 12th, it prompted us to attend the accident site to conduct testing to evaluate the road conditions. This testing involved the use of accelerometer and gyro data from two iPhones as well as multiple video cameras. A preliminary review of that testing as well as some of our preliminary conclusions has been prepared in an Article that has been uploaded on the Articles page of this website.

**March 21, 2013**

### **Large Honour at Public Funeral of Constable Jennifer Kovach - But Identification of Cause of Death More Important**

While it is fitting that the police community and the public at large pay tribute to Constable Jennifer Kovach as a result of her death in a reported traffic accident last week in Guelph, Ontario, the identification of the cause of the accident and her death are even more important.

Emergency vehicles must sometimes travel at high speeds to reach an incident that could become deadly due to their delay. Every effort should be made to ensure their safety and the safety of the public that needs to make the way clear for them. Roadway deficiencies that might jeopardize the safety of emergency responders must be clearly identified, not just to an inner circle of those agencies directly involved but to the general public that has no special interest or conflict of interest.



Emergency responders travelling at high speed are in heightened danger when encountering poor weather conditions and/or roadway deficiencies.

It is obvious to us that the focus of the official news media has been removed from informing the public about the cause of Constable Kovach's accident. While there are often photographs accompanying news stories showing the colliding vehicles, in the present case that information has been scant. We have not observed any still images showing the damage to the cruiser from which we can make an evaluation. What short video footage has been provided suggests that Constable Kovach's police cruiser may have been struck in the right side. If that cruiser was travelling around a right curve then this circumstance would be unusual. Loss-of-control during travel around such a right curve should generally result in clockwise rotation which should result in an impact to the driver's side of the vehicle, not the right side.

If the impact was to the right side of the cruiser the additional issue that needs to be addressed is whether Constable Kovach was wearing a seat belt and whether lack of seat belt use may have contributed to her death. This is an important matter because first responders need to be aware that they are not super-human and the impact forces that cause death in any collision will affect them in an equal fashion. When travelling at higher speed to an emergency they absolutely must put on a seat belt so that they increase their chances of surviving an unexpected accident or even a harm deliberately aimed at them.

While these discussions may be difficult to the family and friends of Constable Kovach they must be engaged so that a future tragedy like this can be prevented.

**March 18, 2013**

### **Actions of Durham Police Chief Mike Ewles to Pursue Whistleblower of His Force's "Misconduct" Simply Can't Be Tolerated**

It was Chief Mike Ewles who was quoted as saying that a "breach of confidentiality" by someone in his force which disclosed incidents of misconduct "simply can't be tolerated". We believe it should be the other way around. The Chief's actions to pursue the persons who made the police wrongdoing public is the behaviour that our society should not tolerate.

To the credit of the Toronto Star Newspaper and reporter Tony Van Alphen the public is now able to judge for itself what behaviour is acceptable of police and what steps need to be taken to insure that they do not act like the criminals they are supposed to catch.

The Toronto Star reported that on December 14, 2012 a Durham police officer who had been at an off-duty social gathering at a local bar had crashed his vehicle in a single vehicle incident. He reportedly called an on-duty police officer to pick him up near the accident site and drive him into downtown Oshawa. The on-duty officer had reportedly been operating a RIDE program on that evening but there was no information whether this on-duty officer conducted a blood-alcohol breathalyser test on the off-duty officer

who was involved in the accident. The accident-involved officer was identified as Richard Robinson. The on-duty officer was identified as Tim Wray.

As part of his comments regarding the incident Chief Ewles was quoted as saying "We will continue to hold everyone accountable for their actions to maintain the trust and support of the public we serve". Our trust of the police is affected less by the actions of the two officers involved than the attempts by Chief Ewles and the police association to prevent the public from learning about this police misconduct. How can the public have any confidence in Chief Ewles' force if they cannot know if members of his force are involved in criminal activities? Leaving the scene of an accident is an offense under the Criminal Code of Canada. In fact we are involved in a fatal incident where a driver allegedly fled the scene and the driver's maximum penalty could be life in prison. So this action can be serious.

Police are constantly involved in incidents where deaths occur to persons that they attempt to apprehend or who are in police custody. Similarly snips of video continually pop up on YouTube or similar social media where police appear to be assaulting persons or where deaths occur around alleged police chases and the like. In many of these incidents the public is not provided with the full evidence that might indicate that there was little or no police wrong-doing. So much has to be left to the public's confidence in the police that they are the "good guys" and would not do the bad things that appear, on face value, to be visible in the popular media. However when there is any appearance of a cover-up it does tremendous damage to that good image of police.

Like so many police administrators Chief Ewles misunderstands what issue is more important. He fails to understand that the case of police wrong doing that has been uncovered is capable of being accepted by the public as the actions of a few bad decisions. However the appearance that police try to cover up wrongdoing is tremendously more damaging and important to the proper functioning of his force, and that of any police force working in any region where the public has heard or read about this attempted concealing of police wrongdoing. The next time another social media photo or video shows something that may appear to be police wrongdoing there will be a few more persons who will remember this incident and will believe that, if there is actual wrongdoing the police are likely trying to hide it. From our observations, many police forces should tear up their public relations procedures as they continually fail to understand the bad image they are unnecessarily creating of themselves without recognizing it.

## Interesting Results From Emergency Brake Testing of 2012 Ford Fusion



Tire mark at end of emergency braking test on gravel shoulder using a 2012 Ford Fusion.

We have obtained some interesting results from our emergency brake testing of a 2012 Ford Fusion and some of these have been uploaded in four separate articles in the Articles page of this website.

One of the more interesting analysis techniques involves using the "Text Insert" function to produce various markers in our video so that we can follow the rotation of the steering wheel and the vehicle during our braking tests. An example of such insertion is shown in the photo below where we insert a row vertical lines along the dash to observe how the white roadway edge line migrates in the view and therefore indicates vehicle rotation. Another example shows a horizontal white line which is produced at the protractor of the steering wheel hub to explore the magnitude and quickness of steering inputs.



"Text Insert" function allows markers to be placed in video to observe steer and vehicle rotation.

We have been observing the rotation that occurs when a vehicle is braked while exiting partly onto a gravel shoulder as this is one mechanism by which drivers lose control of their vehicles and crash on rural highways. The documentation of the characteristics of the tire marks produced in these tests means that we can compare them to tire marks we find at accident sites to determine how and why that crash occurred.

We invite visitors to check out the complete series of four articles on this testing in the Articles page of this website.

**March 17, 2013**

### **News of Possible Child Fatality Due to Rear Ending Impact By Impaired Driver Near Kitchener, Ontario**

Although not official, we have heard disturbing reports that a 17-month-old child has been killed, within these past few hours, near Kitchener, Ontario when a disabled Volkswagen Jetta was struck from behind by a vehicle operated by an alcohol-impaired driver. The impact also resulted in critical injuries to the child's mother. Confirmation or retraction of that information will likely be made shortly as more details become available.

UPDATED: MARCH 17, 2013; 1525 HOURS

Unfortunately the nightmare appears to be true as official news media are reporting that the collision occurred shortly after 1830 hours yesterday, March 16th, as the Jetta was reportedly stopped in a live lane of westbound Highway 7/8 near Fischer-Hallman in Kitchener. Beyond being charged with impaired driving Hugh John Brake, 53, of Kitchener was also charged with possession of marijuana, and obstructing justice.

This is a terrible destruction of a young family.

**March 16, 2013**

### **Series of Articles on 2012 Ford Fusion Emergency Braking Tests - Fourth Article Added**

Due to the space required to display various photos and screenshots from our testing with the 2012 Ford Fusion, our series of articles is increased to a fourth article. The third article has just been uploaded on the Articles webpage.

**March 15, 2013**

### **Cause of Death of Constable Jennifer Kovach of Guelph, Ontario Dealt With In Silence**

If a police officer had been shot by an assailant there would be tremendous discussion with news media clamoring to uncover exactly how the incident unfolded. Yet, because Constable Jennifer Kovach might have lost control of her cruiser due to a "slick" or "slippery" road surface this equally tragic consequence appears to be dealt with in silence. This appears to be the scenario that is unfolding following yesterday's tragedy.

At approximately 0030 hours, Thursday, March 14, 2013 Constable Kovach was reportedly travelling northbound on Imperial Road in Guelph, Ontario, and rounding a significant right curve, when her cruiser crossed the centre-line of the road and collided with a Guelph City transit bus. News media have reported that the road surface was "slick" or "slippery" but unless these reporters were at the scene to enable them to make that conclusion the only other way they could know that is if someone who was intimate with the details of the event relayed that information to reporters. But no further information has been provided.



Striking the front end of a Transit bus can be dangerous because its large mass will cause a passenger car to come to an abrupt stop, similar to striking an immovable barrier.

If this event had involved a private citizen there would be the usual "experts" and police investigators reminding persons not to speed, to drive according to the road conditions and "if you see snow, go slow". So where are the pundits? Is it because this was a police officer and suddenly it is not appropriate to make such comments? Where is the unbiased, scientific appraisal that asks "How easy is it to know or detect that a road surface is slippery?" Was Constable Kovach careless or was it actually difficult to recognize that the road surface was slippery?

At Gorski Consulting we have been conducting a number of braking and dynamics tests on snow-covered road surfaces in the last two seasons and we are aware of the difficulties presented to drivers. Seemingly similar road surfaces can provide very different grip. We have indicated on a number of occasions that there is no such thing as "**The**" road condition, but there are variable road conditions and those changes can be difficult to detect by the average driver.



Road conditions are more susceptible to change at a curve because the wind direction will change with respect to the road so that a bare and wet road may suddenly develop a layer of blown snow on the surface that was not present on the approach to the curve.

The controversial point is that the problem can be increased, not reduced, by plowing, sanding and salting. If a road surface is left to be enveloped by the natural environment then road conditions can become uniformly treacherous, but the important point is the word "uniformly". These roads are more uniformly treacherous and therefore the expectations of drivers are less likely to be violated. But when snow plowing/sanding/salting is not uniformly applied there can be segments of road that are markedly different than others. Certainly they can be less "uniform" in their condition than if their condition is only affected by the natural elements.



Our observation is that the performance of roads at curves can be affected not only by the natural element but how road maintenance personnel alter their condition.

That is why we stress that it is vitally important to keep track of the activities of road maintenance personnel. Not to act as "Big Brother" or to be somehow disrespectful of their activities, but because it is so vitally important that we know when their activities, inadvertent as they may be, change the character of the road and make its condition less predictable. When salt or sand is not uniformly applied it exacerbates the unpredictability of the road surface that is already created by the natural environment. When plowing is discontinued or changes for various reasons this increases the unpredictability of the road conditions. Often this cannot be blamed on the road maintenance personnel, it is often that road maintenance personnel cannot bring a road surface to a uniform condition and in fact, in some cases their activities increase the potential of a loss-of-control collision.

These issues are being kept silent like a dirty little secret as there are large monetary repercussions involved. Lawyers become involved and large civil suits are launched. The reputations of various supervisory and managerial personnel become threatened. Thus there is a strong resistance to getting down to a recognition of the problem and dealing with it. The process is being pushed and pulled by legal threats and law suits rather than in the interests of public safety.



Which side of this road represents "The" road condition? Would the condition change depending on which direction a vehicle is travelling? We indicate that road conditions are often variable.

There are important repercussions in the fatal result of Constable Kovach's collision. There are persons ready to criticize the actions of police with respect to their responses to emergencies and so police supervisors and administration feel threatened. There are persons ready to place blame on those responsible for the road maintenance and so road maintenance personnel feel threatened. There will be strong pressures to place the blame on the actions of Constable Kovach so as not to implicate others. From our observations how the eventual investigation results have unfolded in the past has often been manipulated by these fears.

**March 14, 2013**

### **Guelph Police Officer Jennifer Kovach, 26, Fatally Injured in Collision With City Bus In Guelph, Ontario**

It is being reported that a Guelph City police officer has been killed in traffic accident in Guelph, Ontario in the early hours of this morning, March 14, 2014. Strangely, not a single news organization has been able to explain where in the City this collision

occurred. They indicate that the marked cruiser crossed the roadway centre-line before colliding with the City bus and that roads were "slick" and "slippery".

UPDATE: MARCH 14, 2013; 1320 HOURS

Credit goes to the Mississauga Newspaper for providing the location of the crash as follows:

"This morning, shortly after 12:30 a.m., Const. Jennifer Kovach was travelling north on Imperial Rd. S. Officers report her vehicle crossed the centre line and struck a Guelph Transit bus near the entrance to the West End Recreation Centre."

UPDATE: MARCH 14, 2013 1705 HOURS

Information about the manner of contact between the Guelph City Transit bus and the police cruiser has been absent and it reflects the lack of true facts that are revealed via the official news media. Having examined the site on Google Maps it is clear that there is a significant curve in Imperial Road in the vicinity of where the reported crash occurred. In such an urban environment where the speed limits are low it is generally difficult to kill oneself unless there is an unusually rare circumstance where, for example, the front end of the bus penetrated into the driver's door of the cruiser. Knowing whether the direct damage to the police cruiser was to the front end or side would narrow the list of possibilities as to how and why the fatal injuries occurred. Again, the fact that the official news agencies have not reported this basic information is demonstrative of the unreasonable, tight lid that is placed on very basic information at a time when a situation like this is unfolding.

It has been reported that Constable Kovach was responding to a call or incident when the accident occurred. But we know from many recent incidents involving police that this vague wording is used to describe many possibilities including the possibility that the officer was travelling at high speed according to an emergency protocol. The basic fact whether the officer was responding to an emergency or not could have been obtained from the various news outlets or they could have simply indicated that they asked the question but a response was not provided.

If the road surface was indeed slippery then this could be a contentious issue. We have mentioned on numerous occasions that police are often in a conflict of interest when they have to decide to reveal whether roadway problems were a factor in a crash because the police force is paid by the Municipality of Guelph which could be determined at fault if a roadway problem was revealed. How the police will act when it is one of their own that could have been affected by a roadway problem will be important to follow. However we are not surprised that even basic information would be withheld at this time, even when there is no acceptable reason to withhold that basic information, while various negotiations and strategies are considered. We will follow the information that is released and comment on its appropriateness as this incident unfolds.

**March 12, 2013**

## **Six Fatalities in Warren Ohio Impact With Guardrail - But What Happened to the Guardrail?**

We find it incredible how the news unfolding around a great tragedy in Warren, Ohio seems to be focused on select aspects of the crash while ignoring other important issues related to the safety of the roadway.

Six teenagers died on Sunday morning, March 10th, 2013, reportedly after the Honda Passport in which they were occupants "crashed" through a guardrail at a curve of Pine Avenue in Warren, Ohio and flipped upside down in a pond. All six occupants reportedly drowned. Two other occupants of the vehicle managed to escape.

The various news agencies have been following the script laid before them by police and local officials whose focus has been narrowed to issues of the speed of the vehicle, the fact that it was alleged to be stolen, and that none of the occupants of the vehicle were wearing seat belts. But there was no reliable basis provided for any of these allegations. While many of these allegations may prove to be true we find it incredible how they can be made at this early time, and accepted, without any supporting facts what-so-ever. Meanwhile the glaring issue of the likely inappropriate interaction between the vehicle and the guardrail is being ignored as if it was some mysterious ghost or fable. We want to focus on the issue of the guardrail however before doing so we want to provide some comment on the unacceptable lack of supporting evidence to back the allegations that have been made and believed by all.

With respect to the speed of the vehicle police were exceptionally quick to let everyone know that they felt that the speed of the Honda Passport was the primary factor that led to the deaths of these six teenagers. It needs to be emphasized that a 1998 Honda Passport will not contain an event data recorder ("black box") to reliably document the pre-impact speed of the vehicle. So there has to be other evidence that the investigating police must rely upon.

That speed evidence can occur, most commonly, from a set of "yaw" tire marks that is deposited on the road during a loss-of-control of a vehicle. By measuring the characteristics of these yaw marks a speed estimate can be obtained. What is disturbing to us is that we see in some of the scene photos that the road surface was wet, or at least very damp, and in such scenarios it is difficult for a vehicle to lay a good, visible set of yaw marks. Interestingly we also note that at no time, during a news conference or otherwise, have investigating police provided an explanation of how they arrived at the conclusion that the speed of the vehicle was the primary factor in the crash. Certainly they could have said the conclusion was based on physical evidence that they found at the collision site and we could infer that (somehow) visible yaw marks were laid on the wet surface. But they said nothing of the sort. They said absolutely nothing about the

basis for their conclusion. So we await the evidence that supports these allegations that have already been thrown about to every news agency that might take the bait.

The evidence of vehicle speed can also be obtained from calculating the speed lost from the kinetic energy that was possessed by the vehicle and then dissipated through various visible acts of violence observable in the vehicle structure and along the path that the vehicle took to rest. So this is a simple game of arithmetic, if you will, where we observe the evidence of destruction and assign a certain amount of kinetic energy to that observed destruction and we add it all up like  $1 + 1 = 2$ .

Take for instance the damage on vehicle that has two feet of crush on its front end from an impact into an immovable barrier at a speed of 50 km/h (30 mph) and, knowing the stiffness of the vehicle's structure, we can estimate how much energy was dissipated, and therefore we come to the conclusion that the vehicle must have been travelling at 50 km/h just before it struck that barrier. And if there is some destruction in the roadway environment such as a tree or pole damage, or if there are tire marks, we can use all that information to calculate loss of kinetic energy and eventually the speed of the vehicle. So what evidence do the police have about the destruction on the vehicle and at the site upon which they can make a reliable estimate of vehicle speed?

We are at a disadvantage as we are not privy to the details of the investigation, but photos of the damaged vehicle have already been displayed through numerous news outlets. So let us look at the damage to the vehicle to calculate what amount of kinetic energy could have been lost from that source. The immediate and obvious fact is that, nowhere on this vehicle is there crush that is anywhere close to "two feet of crush on a vehicle front end". So to suggest that the damage to the vehicle structure indicates a speed loss of 50 km/h (30 mph) is simply preposterous. There is minimal damage at the bumper level of the vehicle (which is the stiffest portion) and there is minor to moderate damage in the grille, hood and roof areas. By no stretch of the imagination can someone conclude that the damage on this vehicle represents an energy dissipation equivalent to a 50 km/h speed. There are other issues related to striking the water of the pond that need to be discussed but for the time being, when we discussing the isolated issue of damage on the vehicle, it shows you cannot use this damage in your conclusions of a high speed.

This now leads us to examine the destruction at the site for our calculation of the lost kinetic energy. And this naturally brings us to the interaction of the Passport with the guardrail that is our main concern. If there is minimal evidence in the damage of the Passport to support the allegation of a high speed then the only remaining evidence that police can rely upon is the destruction caused along the travel path of the vehicle to final rest. Again, the meticulous coverage by the various news agencies had failed to provide a useful image of the collision site to know the full extent of what evidence might exist there.

On that note, how difficult is it for professional persons to take a set of three or four photos along the path of the vehicle up to the point of the guardrail impact, or even a single photograph of the damage to the guardrail itself? It greatly strains our belief in the unbiased system of news reporting when not a single news agency has been capable of providing a photograph of the damage to the guardrail that absolutely had to exist if the Passport was travelling at such a high rate of speed that "this was the primary reason why the six teenagers were killed". There are a number of emotion-grabbing photos of the teddy bears lined up along the length of an undamaged guardrail but absolutely nothing to show that a speeding vehicle crashed through this barrier. So why is that so? Please do not tell us that there is no damage to the guardrail but no one has recognized the significance of that. And we already have the evidence of damage on the Honda Passport that does not show any obvious damage from striking a solid guardrail. Meanwhile we see in at least one of the photographs that an anchorage post of the guardrail is visible and that post is thoroughly rotted out. We recognize that, with the lack of evidence that has been provided, we could be misled. But every photo we have seen of portions of the guardrail show no signs of damage.

So where is this objective evidence that police will rely upon to support their decision to let all the news media know that speed was the primary factor in causing the death of these teenagers? We welcome the opportunity to see the evidence. Even if the speed of the Honda Passport was 80 mph at some time before entering the curve, is that sufficient to conclude that speed was the major factor that killed these teenagers? One might quickly interject "Why of course it is, 80 mph is likely a reckless speed". But the relevant fact is simple: Where was the speed in relation to the barrier impact? If the Honda Passport was travelling at 80 mph (128 km/h) when it began to lose directional control and it yawed and spun down the road for 100 metres (656 feet) a great amount of speed could be lost before the vehicle "struck" the guardrail. For example at a deceleration rate of 0.2 to 0.4 g the speed lost could be in the range of 44 to 63 mph (71 to 101 km/h). So by the time this vehicle reaches the barrier impact its speed could be quite manageable such that a solid guardrail that is anchored at a proper height and struck at a reasonable angle should be able to deflect the vehicle away from the water. So if this was the actual set of circumstances then the initial speed of the vehicle cannot be said to be the "primary factor" in causing the deaths of these individuals. A very likely candidate for that dishonour could be a guardrail that did not perform as it should have. But without providing the details of how they determined the speed of the vehicle and without details about the speed of the vehicle at the point when it struck the barrier it is inappropriate to accept that the police are saying because there has been no basis provided from the conclusions that have been given to the news media and the public.

Yes, the complication is that a fast-moving vehicle can enter a body of water and produce very little evidence of damage to the vehicle and that could be a way of determining speed if the final rest position of the vehicle is known. And the vehicle may also have been vaulted into the air and come down at some location and this could be another way that police could determine a high speed of the vehicle. And we await that objective evidence. In the meantime, the lack of focus on the fact that the Honda Passport seemed to magically pass by the guardrail without causing damage to the

vehicle or the barrier raises very large red flags about the manner in which this investigation is proceeding.

### **Results of Emergency Braking Tests Now Available on Articles Page of Gorski Consulting Website**

We have now uploaded the second article in a three-part series on our emergency braking tests employing multiple video cameras as well as the accelerometer readings of the iPhone 4S cell phone. We have not observed any overt deficiencies in the iPhone accelerometer's display however we are still continuing our evaluations. The possibility of using a cell phone to reliably measure the dynamics of vehicle motion is intriguing however its functioning still needs to be compared to more traditional accelerometer hardware such as a Vericom or VBox. With the popularity of the iPhone it is likely that these comparisons will be completed in the not-too-distant future.

**March 11, 2013**

### **Flooding On Clarke Road North of Oxford Leads To "Boat" Traffic In London, Ontario, Canada**



Is it a bird? Is it a plane? Is it Superman?

Flooding on Clarke Road just north of Oxford Street in London Ontario Canada is common and therefore when it occurs the City maintenance personnel block off the northbound curb lane with traffic cones to keep vehicles from "drowning" in the shallow lake. Only on the morning of March 11, 2013 someone forgot to block off the lane

resulting in some tremendous spray and possible surprise to some motorists who entered the area at speed without recognizing the depth of the water as shown in some of the following photos.







**Appalling Narrow Focus On Speed of SUV in Six-Fatality Impact of Guardrail in Warren Ohio**

While speed may have been an issue, as reported by police, the lack of focus on the condition of the guardrail demonstrates the appalling mis-information surrounding the death of six young occupants of an SUV that sank upside down in a swamp next to Pine Ave in Warren, Ohio on Sunday morning, March 10, 2013.

A similar result occurred south of Alliston, Ontario on January 12, 2013 where a vehicle ended upside down in a water-filled ditch and all three occupants perished. In the Alliston instance there was no guardrail while such a properly installed barrier would likely have saved the vehicle from coming to rest upside down.

In yesterday's Warren, Ohio crash there was a guardrail however photographs of the site clearly indicate some problems particularly with the obviously low height of the rail. There is an appalling lack of education and training demonstrated both in the news media, police and the general public regarding why roadside barriers exist, how they are supposed to look like and how they are supposed to function.

Roadside barriers are not there just to make things look pretty. They serve a very important safety function. They are there to protect vehicle occupants by preventing vehicles that go out of control from entering into an area of the road where a dangerous condition might exist. That dangerous condition could be an immovable object such as a concrete wall. It could be a 200 foot cliff. It could also be a shallow pond. Each of these could cause fatal results.

But if a vehicle remains upright and comes to rest on its wheels then a shallow pond, creek or swamp can be a minimal problem. But that cannot be guaranteed when a vehicle leaves a roadway at highway speed and a rollover is possible. The function of a guardrail is to accept solid contact with the mass of the striking vehicle at a proper height so that the vehicle does not submarine underneath the rail or become projected over top of the rail. Thus the height of the rail is extremely important.

In the Warren Ohio multiple fatal crash the guardrail clearly looks to be too low. Anyone with any experience with roadway design and maintenance would know that. We are certain that numerous persons with experience with roadway design and maintenance are shuttering in silence as they look at this guardrail. We write "in silence" because ethically, as persons who should be concerned about the public's safety, they should be shouting loudly to anyone who will hear that this low guardrail is a death trap and similar installations should be repaired. Instead many persons with experience in roadway design and maintenance are also those who are employed by the various roadway maintenance organizations, whether they be paid by a municipality, state, province or other official organization that could be sued if a roadway is not maintained properly.

The lack of proper interaction between the guardrail and the SUV is also apparent when we see the photos of the SUV which has minimal damage at the bumper level and considerable damage in the hood and roof areas. Clearly this looks like a situation where

the low guardrail "tripped" the SUV and caused it to roll over rather than to re-direct it as a properly functioning guardrail should.

The comments we make are obviously based on limited information as we can only look at a few mis-directed photos of the accident scene and similar photos of the SUV. In a proper investigation we would have much more evidence to work with as we would insist on examining the vehicle and site at the earliest possible moment. The fact that police and news media have focused the attention of the public on the speed of the vehicle, without mentioning the likely dangerously low height of the guardrail is appalling. Yes, we need to be reminded that speeding is a dangerous action, but even speeding does not need to result in six fatalities and a properly functioning guardrail might have prevented the tragic results in this case.

UPDATE: March 11, 2013; 1735 Hours

The photo below demonstrates the sad irony of this tragedy as friends and relatives of the six deceased teenagers lay teddy bears and other mementoes directly against the very low guardrail that they do not recognize as the factor that might have contributed to the deaths.



Teddy bears laid against the low guardrail by well-wishers who are unaware of the defectively low rail that likely contributed to the deaths of the six teenagers.

To us this is an additional tragedy - that the public is completely unaware of the true additional facts.

**March 10, 2013**

**Gorski Consulting Conducts Emergency Braking Tests With 2012 Ford Fusion Equipped With Multiple Video Cameras and iPhone Accelerometer Display**

We have attached a new article discussing the instrumentation we used during our recent testing with a 2012 Ford Fusion during emergency braking tests on highways near London, Ontario, Canada. We encourage you to check out the article and the following additional articles that will discuss the results of individual tests.

**March 7, 2013**

**Toronto Star Newspaper Reveals How Ontario Government is Secretive Regarding Complaints Against Ontario Driver Training Schools**

Whether it is because the Toronto Star is such a large, independent entity or because it houses good reporters and a management group that understands its responsibilities is not clear. But our evaluation of news outlets throughout Ontario demonstrates that the Toronto Star continually works hard to properly inform the public about matters that matter.

The latest investigative report from the Toronto Star is entitled "The Thousands of Complaints Against Driving Schools the Province is Keeping Secret". The Star reports on their efforts to obtain information on the thousands of complaints against Ontario driving schools - information that is being prevented from release by a secretive Ontario government. The government indicated the Star would have to pay \$7,500.00 if it wanted to see that list. When the Star asked the Ontario Ministry of Transportation for the names of "...the 477 driving instructors whose licenses were taken away and the reasons why, the ministry said that information is not public". There are a number of other issues discussed in the Star article that should raise the hair of any parent whose child is sent to be present with such a driving instructor without knowing if complaints exist about that individual or the nature of those complaints.

We have long observed the inappropriate operations of the Ministry of Transportation with regard to how it operates the Province's Driving Instructor's programs. The whole program fails on many fronts to curtail the activities of unqualified instructors while supporting a monopoly system where potential highly qualified instructors can only enter the field via a limited number of established driving schools, regardless of the qualifications of a candidate, while the true experience and qualifications of the established school is often substandard. This results in the existence of many driving instructors who should not be instructing anyone, particularly the young drivers who do not receive proper training thorough such a corrupt system.

We congratulate the Toronto Star news organization for their consistently high standard of reporting, that only reports information, but conducts an ethical investigation around that information, before creating articles that truly inform the public about the real issues.

### **Official News Media Continue To Avoid Discussion of Cause of Tractor-Trailer Crash Through Guardrail of Highway 401 and Plunge into Nith River**

It is becoming glaringly obvious how official news media are failing to discuss the issue of how a transport truck crashed through the south guardrail of Highway 401 and plunged into the Nith River between Woodstock and Cambridge, Ontario in the late morning of Tuesday, March 5, 2013. As an example, the latest CTV television news segment from the accident site contained an interview with a police spokeswoman and this segment lasted for approximately 2 minutes and 40 seconds. At no time was the issue discussed of the guardrail or how or why this truck departed the highway and led to the death of its two occupants. Instead, there is a continual discussion of how the clean-up operations are proceeding and what equipment and staff are involved. It is not clear what value such information is to the general public when compared to the possible life-threatening conditions that need to be addressed with respect to roadside barriers that are not preventing vehicles from passing through them.

The obvious issue is that guardrails and other roadside barriers cost considerable money to install and maintain. However if they do not protect the public from the dangers that lie beyond them then why are the barriers in existence? If tall snow banks are allowed to be created in front of these barriers the snow will compress and harden creating an solid, icy structure that is able to support considerable weight. These hardened snow banks act as ramps in preventing proper interaction between a loss-of-control vehicle and the barrier. The effectiveness of a guardrail is that a vehicle's centre-of-gravity is supposed to be captured within the barrier's deforming and deflecting structure thus redirecting the vehicle from the harmful condition that lies on the other side of the barrier. When a hard and tall snow bank lies in front of the guardrail the approaching vehicle is lifted up enough to change the manner of contact with the barrier causing barrier over-ride. Furthermore, when a large percentage of vehicles on the highway are large trucks and buses then a large percentage of vehicles on the road have a much higher centre-of-gravity than that of a typical passenger car or light truck. Thus the barrier that is designed to deflect the centre-of-gravity of a lower passenger car will not perform adequately when being struck by a higher-centre-of-gravity vehicle such as a large truck or bus.



Snow thrown against guardrail next to the north Thames River bridge on Highbury Avenue in London, Ontario from January 13, 2010.

This is not a new problem. We were also the co-authors of a research paper in 1987 by the University of Western Ontario Multi-Disciplinary Accident Research Team entitled "Unsatisfactory Roadside Barrier System Performance in Real-World Crashes: Lessons to be Learned" which was presented at the Society of Automotive Engineers Congress in Detroit. That paper presented the very same problem we are discussing in the present case - the build up snow banks in front of barriers that prevent the functioning of those barriers as they were designed. It seems that 26 years later we have not learned those "Lessons to be Learned".

From an engineering standpoint there should be nothing preventing the installation of higher and stiffer barriers, or preventing snow banks to exist a critical areas of a barrier other than cost. It is glaring how this important issue is being kept from the public's attention. Although it is understandable as the solution is costly and magnitude of the problem is large. However a failure to reveal these problems means that the public is not allowed to participate in the discussion and consider possible solutions.

The police have since released the identities of the two deceased occupants of the truck in the present collision at the Nith River. They are both from Brampton, Ontario. The person reported as the driver was 38-year-old Anand Vora while the passenger was 37-year-old Jasjit Sandhu.

**March 5, 2013**

**Transport Truck Crashes on Highway 401 Into Nith River Between Kitchener and Woodstock, Ontario, Near Location of Recent Guard-Rail Work on South Side of Bridge**

Official news media are only discussing a likely fatal collision that occurred at approximately noon today in the Nith River as a "recovery effort" by OPP Police without noting anything about why a transport truck fell off the river bridge and down into the Nith River. There had been recent work on the south guard rail of the bridge which is likely very close to where the truck left the road. An obvious question would be whether the gap created in the guard rail during the construction work was ever closed to prevent vehicles from passing through the gap or the weakened barrier.

As news agencies continue their coverage, a CTV helicopter passed over the site and videotaped the final rest position of the tractor trailer that was mostly submerged in the water. Interestingly, it is as if the videographer was working very hard not to videotape any part of the south bank and guardrail where the tractor-trailer existed the roadway as one could see, whichever way the camera was pointed it was always turned away from this important evidence.

One of the on-site photographs showed a number of emergency workers converged around the concrete south wall of the bridge and there was a large ramp of plowed snow placed against that wall. But no one even considered to ask how such a hard ramp of snow placed against the wall of a bridge or guardrail would affect how a vehicle would intersect with such a barrier and whether this would cause the vehicle to be ramped over top of a barrier. In fact we have seen this several times and have warned about it in earlier postings on this website.

**UPDATE: MARCH 6, 2013; 1915 HOURS**

While we do not like to use photos and other media developed from official news agencies we are making an exception in this case as the photos illustrate in an important safety issue. The photo below was one of those presented by the CTV News in their coverage of this tragic collision on Highway 401 where two occupants of a transport truck perished after their vehicle broke through the south guardrail and plunged into the Nith River.



CTV News photo of remains being made to damaged guard rail where transport truck broke through and plunged into the Nith River

Although there was extensive media coverage of the event on the day of it occurred there were no photos or video taken of the guardrail and road where the transport truck exited the road. Now, as of March 6th, there are a number of photos of that guardrail but only after alterations have been made and at a time when repair crews are already destroying the evidence that the emergency personnel have not previously destroyed.

So what was the condition of the guardrail when the collision occurred? Maybe the public will never know. But the above photo provides some possibilities even though the evidence is much destroyed. Look at the bank of snow against the guardrail. Although much of the snow has melted it is clear that the snow is piled against the guardrail. When a snow has been plowed into such a bank and it rests there for several days the partial melting transforms the bank into something that is very solid which can support a large weight. This is not a snow bank of fresh snow. It is an aged bank that is likely condensed into a solid icy structure. When a vehicle approaches such an aged snow bank it can act like a ramp and make the guardrail height irrelevant. Although a typical guardrail is often little match for a tractor-trailer that approaches it at a significant angle the point is that we have no information about that at this time. And we will likely have none of that information provided to the public. All we know is that the functioning of a guardrail like this can be compromised when snow is placed against it in this fashion.

One argument might be, well, where do we put the snow if we cannot put it against a guardrail? That is not an easy or answer but it is accomplished by pushing the snow away from areas where we know that a tall snow bank could become a safety issue. Certainly one should not pile up a large mound of snow onto a guardrail such as this

when we know what the result will be. There are plenty of areas past the river area where the snow could be pushed to a resting location.

The other issue is that Highway 401 contains a very high percentage of large vehicles. During the work week the percentage of these vehicles using the highway is well above 50 percent. Yet guardrails and various barriers are not designed to deal with the very large energy that must be dissipated when these large vehicles strike these designed structures. That is a simple fact. Even if there was no snow bank against the south guardrail at the Nith River it is likely that the truck might be tripped by the "low" height of this typical guardrail, like such guardrails have typically done in so many previous instances on our highways. What benefit does the public gain when a large portion of the roadside systems we have on our major highways will not be effective, and will likely increase the severity of a collision when a large vehicle is involved. Although the public does not realize it there have been a number of inter-city bus crashes on various inter-state type highways in North America in the last few years where the bus has been tripped by the very low height of guardrails that are designed for interaction with smaller passenger cars and light trucks. The results have been devastating but these facts are not discussed.

The more important issue is that no one talks about these dangers. To the public this is a complete non-issue. That is why it is important that our website documents these issues and discusses them when no one does.

**March 4, 2013**

### **Special Road Conditions of Late Winter**

As winter turns to spring the sun's strength increases and is more likely to melt snow and ice and the darkness of a hard-topped road surface, despite the fact that the air temperature could still be substantially below freezing. Drivers must pay particular attention to this happening as discussed in the most recent article that we have posted in the Articles page of this website.

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**London, Ontario, Canada**

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