

Springbank Driver Fatal Crash Into Tree - Review of Site Evidence

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It was reported that shortly after 0500 hours on Sunday, March 25, 2012 emergency services were called to Springbank Drive between Westmount Drive and Commissioners Road in London, Ontario, Canada, with respect to a collision involving a vehicle and a tree. Subsequent evaluation revealed that a westbound Pontiac passenger car had travelled off the north side of the road and struck a tree on the north roadside. A single, young, male occupant of the vehicle was found to sustain fatal injuries. A witness to the crash reported finding another young male frantically shouting that he could not get the person out of the vehicle. No other vehicles were seen in the area.

The area at the time was described as "foggy" and the road surface contained a certain glistening appearance suggesting that it was damp. Springbank Drive in this area of London, Ontario is a scenic drive adjacent to a well-known park, Springbank Park, that stretches along the south bank of the Thames River. Virgin forest exists on both sides of the road as it curves and changes elevation. It is a pleasant drive giving drivers the sensation of driving through the foothills of the Alps or Rockies, if only for a very short distance.

On approach to the crash site Springbank Drive levels off and becomes straight for a distance of a couple hundred metres as shown in the photo (looking westbound) below.



It can be seen in the background of the above photo that the roadway curves to the left. It is at this point of curvature that the subject Pontiac travelled off to the right (north) side of the road. On the south side of the road we observed a fresh tire mark as shown in the photos below.



Although this tire mark is several hundred metres east of the area of impact one must be careful with such evidence when considering that at high speed, say 90 km/h, a vehicle can travel 25 metres every second. So it is possible that an eastbound vehicle could interfere with the travel of the Pontiac and then come to a stop several hundred metres east of where the actual crash occurs. We are not suggesting that this evidence is related to the crash but rather, this is an educational exercise, where we comment on general possibilities that investigators should be aware of.

The photo below now takes us further west to the beginning of the curve. Note that there is a slight elevation change at the point where the road curves to the left. This elevation change can be appreciated by noting that you can see the surface of the road fairly well for some distance in the background and then suddenly the surface "disappears". Although the elevation change is small, when it is combine with a high speed and a slippery road surface this small effect on the tire force could make a difference in whether a driver encounters a problem.



We are often concerned with the status of the edge of the paved surface and whether there is any evidence of an edge drop off or if there is a substantial cross-slope. One can see in the above photo that the pavement exists over a wide distance beyond the white fog line therefore this is a fairly safe characteristic. We can also report that there was no evidence of a significant cross-slope in the road. One can also see that the road

surface is in relatively good condition without any evidence of patching, pot holes or depressions.

As we approach the area where the vehicle left the road surface we can see in the photo below that the paved surface extends a fair width beyond the white-painted fog-line. One should appreciate the additional safety margins that such a characteristic provides if a driver should encounter difficulties while travelling around the curve.



The photo below shows the vicinity of the north roadside where the Pontiac first left the pavement surface. This is a zoomed in view so that the road distances appear much shorter than they truly are. We have parked our vehicle a short distance east of the struck trees that cannot be seen the background due to the dark shadows. The Pontiac's tire marks will eventually be visible just to the right (north) of our parked vehicle. The beginning of the tire marks will be seen in the earth at about the middle of the right side of the photo.



Before discussing the details of those tire marks we first want to take you through the site to the point where the vehicle hit the trees. So below is another view, looking further west, along the tire marks produced by the Pontiac.



The right side tire marks are perhaps more visible than the left and they are located in the grass toward the right side of the above photo. There are two tire marks side-by-side because the two right side tires are not travelling along the same path. The left side tire marks are located just to the right of the bus stop sign in the background. The struck trees can be seen in the background directly in the centre of the upper part of the photo.

Below is a view, looking further westward toward the trees where the impact occurred. The roadside slopes downward toward the west and toward the trees in the background. You may be able to detect the two sets of tire marks in the grass in the foreground.



The photo below shows another westward view as we approach the struck trees. There was evidence of contact damage to two trees and those are shown in the two photos at the bottom of this page.



The lateral distance between these two trees is at least 5.0 metres and the total length of the Pontiac would be less than 5.0 metres. Therefore it is unexplainable how contact could have occurred to both trees by the same vehicle.

The photo below shows a view looking eastward from the large tree. On the right side of the view you can see gouges in the earth where the tow truck pulled the vehicle back up the slope and onto the roadway. You can also get an appreciation of the road location by noting the position of our parked car that was shown in previous photographs.



Now that we have conducted an initial walk through the collision site let us now return eastward along the tire marks and back to the position where the tire marks first became visible.

The two photos on the following page take us back up the slope along the tire marks. The bottom photograph was taken from adjacent to our parked car and you can see the tire marks in the grass as the Pontiac came toward the camera. A metal post in the upper right corner of the view is the post that contains the bus stop sign. Just east of that bus stop sign there is a small bare portion of earth where it would appear that a snow-plow had torn out the grass possibly in attempting to clear out the snow around the bus stop. Inside that area of bare earth we were able to see the prints of the two left side tire treads.



The photos below show the area of bare earth and the prints from the treads of the left tires of the Pontiac. The bottom two photos show the view looking westward.



The presence of a visible print of the tread of a tire often indicates a lack of braking however, with the prevalence of anti-lock braking systems tire tread imprints may still be present but these could be interspersed with the scrubbing of the earth when the tire is near to lock-up.

In the photo below we continue to follow the tire marks eastward. You may be able to see the two right tire marks and how they appear to come from the same location in the background but then they diverge as they approach the camera. This is a sign that the vehicle was pointing the same direction as it was travelling in the background and that it rotated counter-clockwise as evidenced by the slight curvature of the tire marks.



In the photograph below we approach the origin of the visible tire marks. It may no longer be possible to distinguish them from the grass and dirt near the road edge but they were quite obvious when we were making our observations at the site.



When tire marks are difficult to distinguish from one viewing direction it is possible to obtain a clearer view by viewing them from another direction. This truth is demonstrated in the photo below where we turn around to face westward. Look at the bare earth in the centre of the photograph and see if you can find the tread of the right side tires by matching them to the tire marks on the grass in the background.



The detection is made a little more difficult because the tire of another vehicle has driven over the collision-involved tire mark, but the photo below provides a closer view of the area where the tread print exists.



In the photograph above (looking west) you should be able to detect two tire prints. The print that is more vertical in the one that was caused after the collision and erased the collision-involved print which can be seen angled slightly toward the right. The collision-involved print is only visible in the upper centre portion of the photograph. Below is a closer view of the two tire prints with the collision-involved print located to the right.



The lack of any evidence of scrubbing of the earth would suggest that the tire of the collision-involved vehicle was not sliding with respect to the surface and therefore there is no evidence of braking. However, as we stated earlier it does not mean that braking did not occur just because there is no evidence of sliding.

A witness indicated that the Pontiac was a 2008 model year. If so then this type of Pontiac was equipped with an event data recorder and pre-crash data may likely be available for police to examine.

There was approximately 75 metres of tire marks leading from the pavement edge to the impact with the trees. It is not clear of level of deceleration occurred over that distance. If we assumed it was similar to a yawing vehicle the speed loss might be in the range of 62 to 87 km/h before the vehicle struck the tree. This is substantially higher than the speed limit of 50 km/h however it is quite common for vehicles to be travelling faster than the speed limit along this section of roadway. Even a speed of 90 to 100 km/h would not necessarily explain why the vehicle left the roadway. A damp road surface which could be slippery, accompanied by an elevation change in the curve along with the heightened speed could help to explain the results.

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