Glanworth Curve Double Fatality - Further Analysis

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Not all site analysis is ideal to be performed shortly after a collision takes place. When the environmental conditions are not favourable it is better to wait until conditions improve to collect the evidence that would be uncollectable due to those environmental conditions. An example is demonstrated through our re-attendance at an accident site on the Glanworth Curve on the south edge of London, Ontario, Canada, where a double fatal collision occurred at approximately 1300 hours on February 11th, 2012.

On the day of the collision it was reported that police encountered poor weather conditions. It is not clear whether this had to do with the road surface, visibility or both.

A Ford Escape SUV had travelled partially around the left bend of the Glanworth Curve when it when off to the right roadside and struck a tree. Two passengers in the Escape sustained fatal injuries while a driver and another passenger survived.

Upon our initial arrival at the site, slightly more than 24-hours after the occurrence a substantial amount of additional snow had fallen and some of the snow that might have been present at the time of the collision was most likely altered. Below is the view of the site taken on February 12th, 2012.

The two photos on the following page show the area where the vehicle struck the tree.


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Glanworth

As can be seen, the ground around the roadside was covered by snow and this made it difficult to accomplish some investigative tasks. Due to the snow fall after the accident it was not possible to examine the collision evidence, such as the debris, any possible tire marks and gouges. It was reported that the investigating police were also interested in knowing at what location the vehicle left the roadway. This suggests that they did not obtain good evidence on the roadway that would identify the vehicle's path.

In these circumstances, as well as others, it is beneficial to return to an accident site to obtain additional information once the environmental conditions changed. In this case, we returned to the site on February 17th or about six days after the collision, when warmer weather caused some of the snow to melt and expose some of the markings and debris. Below is a view of the same roadside at the tree impact, upon or re-attendance at the site.

With the snow melted away it was possible to note where the vehicle made contact with the roadside on its way to the tree impact. In this case there was a large tree limb lying on the ground and study of its branches made to possible to estimate the height at which the vehicle passed over the fallen limb. Additionally there was a gouge in the earth just before the tree impact and this was not visible during our initial visit. the angle

of that gouge in the earth also helped to establish the angle at which the vehicle came into the tree impact. The gouge can be seen in the photo below.

Because of the snowfall, much of the smaller debris was also left undisturbed simply because it was hidden from view by the snow. Study of the location of the debris and what portion of the vehicle it came from can be helpful in interpreting the evidence found on the vehicle as well as the motion of the vehicle before, during and after impact.

In this case we made a study a some black glass which we suspect originated from the rear lift-gate of the Escape. This black glass was scattered throughout the grass beyond the tree impact. We documented the field of this debris by placing cones at the perimeter of it. Larger cones were placed at the locations which were furthest from the point of impact to indicate the higher velocity of the projectiles. This activity caused an irregular, circular formation created by the cones. The photos on the following pages show that irregular formation from various angles around its perimeter.


Country Lots
FOR SALE
In Glanworth

In a real investigation we would set up a high tripod or similar instrument so that the irregular formation could be better visualized for court purposes. However it is still possible to get an idea of the shape from studying the above photos. of Interest is the general position of the debris that has been thrown the furthest from the tree as well as the left and right boundaries of the debris. This helps in the estimation of the general angle at which the vehicle came toward the tree impact. For example, looking away from the tree, along the left side of the debris trail the cones were fairly consistent in describing the left edge of the debris field as the cones in the photo below show a general line with a gentle curve.

Similarly, the photo below shows a view looking toward the tree impact along the right portion of the debris field and the line of cones also provides a generally straight line for where the debris exists versus where it does not.

By examining that debris field from the approach toward the tree it is possible to get an appreciation of how the location of the debris compares to the probable angle at which the vehicle approached the impact.

For example, looking at the photo below, we can see that the vehicle did not knock over the real estate sign in the foreground therefore we suspect the path of the vehicle was to the left the sign. We can also examine the fallen limb and recognize that this matches well with the angle of the gouge at the base of the tree. So we would expect that the vehicle entered the roadside just to the left of the real estate sign. Yet, when we looking in the background almost all of the cones are located to the right of that suspected travel path. Yet, if we look closely onto the road edge and dirt in front of the grass we might be able to distinguish some disturbance that could suggest the path of the wheels of the vehicle as it left the roadway.

We can back up further while lining up the evidence to estimate where the vehicle left the roadway. As demonstrated in the photo below.

This suggests that the vehicle was travelling out of its lane at about the location of the road in the foreground.

It is also possible to explore the contents of the debris to get idea about where it was located on the vehicle. As shown below, the evidence can be assembled very much like a jig saw puzzle to reveal some form of identifier that can lead to the a specific part of a vehicle.

In summary, examining the collision evidence in terms of the debris left beyond the area of impact can help with the interpretation of the damage existing on the vehicle as well as any pre-crash evidence found on the road. It is not always helpful to attempt to complete an investigation while unfavourable environmental conditions (darkness, fog, sun position, snow, wetness) prevent the proper identification of the evidence. It must be recognized that certain evidence could become more visible once those environmental conditions change and the investigator should recognize those situations and return to the accident site for further evaluation when that situation warrants it.