



PEDESTRIAN SIR-HIGHWAY ACCIDENT BRIEF

Attachment - Minnesota State Patrol Crash Reconstruction Report

Thief River Falls, MN

HWY17SH002

(8 pages)

MINNESOTA STATE PATROL

Crash Reconstruction Report

MSP ICR#
16321507



District/Allied Agency
Minnesota State Patrol District 3200

Prepared By
Trooper N. Robertson #550

Incident Date
10/06/2016

Incident Location
USTH 59 and Mile Post 349



Nature of Reconstruction

- ❖ **Reconstruction of a single vehicle and pedestrian collision resulting in a pedestrian fatality,**
 - [REDACTED]

Date/time

10/06/2016 @ 0655 hours

Location

10193 USTH 59 (Mile Post 349)

City/county

Pennington County

Principals

[REDACTED]
Joanne Joyce Schultz

Investigator

Trooper Scott Stueber #267

Department

MN State Patrol

Reconstructionist

Trooper N. Robertson #550

Vehicle #1

| | | | | | | | |
|-----------|----------------------|-------|----------|-------------|----------------------|-----|-------|
| License # | [REDACTED] | Make | Chrysler | Model | Town and Country Van | | |
| Year | 2005 | Color | Green | | | | |
| Owner | Joanne Joyce Schultz | | | | | | |
| Address | [REDACTED] | | | City, State | Plummer, MN | Zip | 56748 |
| Driver | Joanne Joyce Schultz | | | DOB | [REDACTED] | | |
| Address | [REDACTED] | | | City, State | Plummer, MN | Zip | 56748 |

Initial notification

On 10/06/2016 I was notified by State Patrol Captain Mike Wedin advising me of a motor vehicle crash in Pennington County at the above mentioned location. Captain Wedin requested;

- ❖ I assist the investigation by mapping and reconstructing the crash scene.
 - I mapped the scene on 10/06/2016.

Weather/environment

The weather conditions this day was partly cloudy. The temperature was 36 degrees F and the wind was out of the SW at 12 MPH.



Scene description

At the scene USTH 59 is;

- ❖ Primarily a North and South roadway.
- ❖ A gradual curve is located to the north and south of the incident location,
- ❖ A residential driveway approach is present at the incident location identified as “10193 USTH 59”. An opposing field approach is also present.
- ❖ The roadway design is blacktop with gravel shoulders. The centerline of the roadway begins to separate traffic movements in preparation for a center turn lane located to the South of the incident site.
 - At the time of the crash the road surface was reportedly dry and free from debris.
- ❖ No roadside distraction or obstruction where noted in this area.
- ❖ Speed limit in this area is 60 miles per hour.

Scene observations

- Arriving on scene I observed:
 - Evidentiary paint marks noting vehicle final rest.
 - Evidentiary paint marks noting pedestrian area of impact in/near the north bound land of travel.
 - Evidentiary paint marks noting debris on the East shoulder of the roadway.
 - Evidentiary paint marks noted pedestrian final rest in the East ditch. The marks were disheveled due to first responder activity, but displayed a general body positioning of head to the North and feet to the South.
- A review of the in car video and in bus video shows lighting conditions prior to sunrise as dimly lit and insufficient for motor vehicle operation without headlights. (See in-vehicle videos)
- The evidence and statements indicated that Anthony Ray Fellman was traveling on foot on USTH 59. [REDACTED] was in the area of the North bound fog (white) line and attempting to cross to the West when he collided with a Chrysler Mini-Van traveling North on USTH 59. [REDACTED] was thrown into the East ditch as a result of the collision. Following the collision the Chrysler Mini-Van pulled over stopping on the northbound shoulder of USTH 59.
- The Chrysler Mini-Van was driven by Joanne Joyce Schultz. Inspection of the Chrysler Mini-Van revealed impact damage to the right front bumper, headlight assembly, hood, and right side windshield base. The damage appeared consistent with a pedestrian collision.

Evidence Collection

- ❖ With assistance from Trooper Scott Stueber #267 I mapped the crash scene. Items mapped include;
 - Final rest of [REDACTED]
 - Final rest/stop position of the Chrysler Mini-Van driven by Joanne Joyce Schultz.
 - Area of impact as documented Trooper Scott Stueber #267.
 - Area documented as debris by Trooper Scott Stueber #267.
 - Road dimensions and characteristics to draw the crash scene.

Crash Reconstruction

- ❖ I reconstructed the crash using the Searle Equation for calculating minimum and maximum vehicle impact velocity.
 - Distance measurements were determined from the CAD drawing. (See diagram measurements)



- Using the documented area of impact [REDACTED] throw distance was measured as 100.772 feet. The Chrysler Mini-Van Continued from the area of impact for 228.995 feet before stopping.
- No evidence was present indicating initial touch down, tumble, or bounce prior to final rest of [REDACTED] ([REDACTED] (*The Searle equation utilizes the overall throw distance and employs averages of touch down*))
- The pedestrian elevation drop in this incident from area of impact to final rest is measured at -5.56 feet and is not factored in the Searle equation. Thru training and experience I know this measurement will have minimal impact upon the velocity of the Chrysler Mini-Van.
- A drag factor of 0.79 was used in the calculation. In the absence of additional evidence for initial touch down the Searle recommended drag factor of 0.79 for a pedestrian in grass was used.
- When utilizing the Searle calculation a speed of 38.3 to 48.8 MPH was derived for the Chrysler Mini-Van at the time of impact with [REDACTED].

Crash Conclusions/Opinions

- ❖ Based on my experience and training in accident reconstruction I feel this accident is the results of the actions of;
 - Joanne Joyce Schultz
 - Driver Inattention
 - Schultz failed to observe children walking/running along the roadway near the area of impact and collided with Fellman as he crossed into the roadway.
 - When reviewing the circumstances of the incident as well as statements taken and utilizing the minimum speed calculated of 38.3 MPH, I believe the speed of the Chrysler Mini-van to have been a factor in the collision.
 - The lighting conditions may have assisted in camouflaging [REDACTED] presence; however Schultz was able to identify the presence of the school bus and the possibility of stop arm/signal activation as indicated in her statement. The average motorist commonly associates the presence of a school bus with the presence of school age children. Therefore the exercising of due care as identified in statute is not simply to obey the stop signal when activated/extended by the bus driver, but avoid a pedestrian collision.
 - Minnesota Statute (169.21s3(d)) regarding pedestrians indicates “every driver of a motor vehicle shall exercise due to care to avoid colliding with any bicycle or pedestrian upon any roadway” and “exercise proper precaution upon observing any child”.
 - [REDACTED]
 - Pedestrian inattention/distraction
 - [REDACTED] failed to look for cross traffic prior to crossing into the roadway and was struck by the northbound Chrysler Mini-van. Based upon statements, [REDACTED] and his siblings where attempting to get onto the bus and may have been distracted by its movements.
 - Minnesota Statutes (169.21s3(a)) indicates “every pedestrian crossing a roadway at any point other than within a marked crosswalk or at an intersection with no marked crosswalk shall yield the right-of-way to all vehicles upon the roadway”.

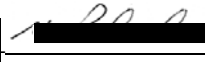


Crash Summary

All reports and finding will be forwarded to Trooper Scott Stueber #267 for his investigation.

Disclaimer: All findings, opinion and conclusions in this report are based on the evidence available at the time of this report. Should any additional information and or evidence become available after this report the findings, opinions and conclusions could change based on the new information.

Trooper N. Robertson
Crash Reconstruction Specialist
Forensic Mapping Specialist
Minnesota State Patrol
District 3200

Signature _____  #550 _____



Addendum:

Formula Work:

Throw Distance: 100.7725 ft.

Ped. Friction: 0.79

$$V_{min} = \sqrt{\frac{2 \times g \times f \times D}{1 + f^2}}$$

$$V_{min} = \sqrt{\frac{2 \times 32.2 \times 0.7900 \times 100.7725}{1 + 0.7900^2}}$$

$$V_{min} = \sqrt{\frac{5126.9017}{1.6241}} \quad V_{min} = \sqrt{3156.7647}$$

$$V_{min} = 56.1850$$

$$V_{max} = \sqrt{2 \times g \times f \times D}$$

$$V_{max} = \sqrt{2 \times 32.2 \times 0.7900 \times 100.7725}$$

$$V_{max} = \sqrt{5126.9017} \quad V_{max} = 71.6023$$

Speed Min:

$$S = \frac{V}{1.466..} \quad S = \frac{56.1850}{1.466..}$$

$$S = 38.3079$$

Speed Max:

$$S = \frac{V}{1.466..} \quad S = \frac{71.6023}{1.466..}$$

$$S = 48.8197$$



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