

Truck/Motorcycle Accident

September 2, 2002

Mr. Scott Tessmer
John R. Guest & Associates
450 Gears Road, Suite 350
Houston, Texas 77067

Re: Cause No. 2001-22399; *Roberto Muniz and Hortencia Muniz, Individually and As Surviving Parents of Roberto Muniz, Jr., Deceased vs. Landscape Depot, L.L.C. and Carl Wayne Scherdin*; In the 125th Judicial District Court of Harris County, Texas.

Our File # TC-2053

Dear Mr. Tessmer:

Assignment

You assigned Texas Claims & Consulting Company to determine the proximate cause(s) and significant contributing factors for the above styled fatal accident.

Additionally, you requested a preliminary expert report outlining our findings and opinions. Please accept this report as fulfillment of your assignment given the material provided.

We reserve the right to alter our final opinions should new information become available.

Discussion

This case was originally assigned to, and accepted by, our office on August 2, 2001.

Material Provided for Review

The Texas Department of Public Safety records.

Fifty-three (53) color copies of photos taken at the time of the accident.

Suzuki Owner's Manual and purchase documents.

Autopsy Report.

Deposition of Carl Wayne Scherdin taken on November 14, 2001.

Deposition of Devon Ganaway taken on May 13, 2002

Copy of the records from Mr. Thomas Grubbs.

Mr. Tom Grubbs report dated August 12, 2002

Field Activity Completed by Our Office

An initial visit to the accident site was completed to obtain measurements for our scale diagram and photographs of the area in general. A scale diagram is attached to this report.

A second visit to the site was necessary to measure the truck in question, confirm our prior measurements with the actual truck and video an actual turn maneuver by the truck driver to the officer's final resting point.

Additional field activity was completed to examine the motorcycle involved in the accident.

A final visit to the company facility was completed to examine and analyze the truck's rearview mirrors and to determine the area of invisibility to the truck's rear.

Brief Historical Review

This truck/motorcycle accident occurred on April 3, 2001, at about 10:15 A.M., near the intersection of Alief Clodine Road and Bridge Crest Boulevard, in Fort Bend County, Texas. The accident site is approximately one-tenth (0.1) mile outside of the city limits of Houston, Texas. This area is about 80% residential and 20% commercial by makeup.

Mr. Carl Wayne Scherdin was the driver of a 1995 Ford F-series dump truck attempting to turn left off Alief Clodine Road onto Bridge Crest Boulevard. Mr.

Scherdin has testified his left turn signal was on and that he was proceeding at a very slow rate of speed as he turned.

Mr. Roberto Muniz Jr., was the driver and owner of a 1998 Suzuki GSX-R750 motorcycle proceeding behind Mr. Scherdin prior to the collision. Mr. Muniz attempted to pass the truck, on the left side, as the truck was turning left. Mr. Muniz struck the left rear of the truck, after skidding a significant distance, with sufficient force to cause severe injuries to his head and other body parts resulting in his immediate death.

Important Police Report Data

Date of Loss	April 3, 2001
Time of Loss	10:15 A.M.
Location	17200 Alief Clodine Road and Bridge Crest Blvd. (0.1 mile outside Houston City limits)
Light Condition	Daylight
Weather	Clear
Road Surface	Dry
Road Type	Blacktop (Bituminous Concrete)
Speed Limit	35 mph for Alief Clodine (51.33 fps)
Motorcycle Helmet	Not Worn
Scale Diagram	Measurements were provided
Photos	Taken at the time of the collision
Motorcycle Skid Marks	215 feet

In the investigating officer's opinion, with respect to factors/conditions contributing, Unit # 1 (truck) turned when it was unsafe.

In the investigating officer's opinion, with respect to other factors/conditions that may or may not have contributed, Unit # 1's driver was inattentive.

The investigating officer did not see the crash and there are no known independent witnesses.

The officer originally cited Mr. Scherdin with criminally negligent homicide. However, in summary, the Fort Bend County District Attorney stated that he rejected the case because the cause of this unfortunate fatality was Mr. Muniz's own negligence.

The officer testified the truck's left turn signal was on and operating normally when he arrived on the scene.

Important Motorcycle Information

Mr. Muniz was driving a 1998 Suzuki GSX-R750 motorcycle at the time of the crash. The specific dimensions are as follows,

Overall length	80.9 inches
Wheelbase	55.1 inches
Front Seat Height	32.1 inches
Ground Clearance	5.1 inches
Weight	394 lbs
Brakes	Front Disc, twin hydraulically operated Rear Disc, hydraulically operated
Speed	0-60 mph in 3.1 seconds ¼ mile in 10.6 seconds to 131 mph
Stopping Distance	60-0 mph in 114 ft.

American Suzuki Motorcycle Corporation indicated there were no crash test analysis data or video for this motorcycle. Suzuki did offer the following;

- This model is designed as a high performance motorcycle with acceleration, speed and cornering the focus of the design.
- The use of lightweight aluminum components is used to reduce the weight.
- The use of “thinner-walled” box tubing reduces weight without reducing or sacrificing strength.
- Unlike an automobile, there is no “crush zone” or other construction design to protect the rider.
- The motorcycle should be expected to suffer significant damage in traumatic crash situations.
- The design of the motorcycle results in even more emphasis on front wheel braking. In other words, the rear wheel provides even less braking power than other motorcycle designs, such as large touring motorcycles where more weight is distributed more to the rear wheel.
- More than anything this motorcycle is a racing bike designed for extreme speed and handling.

Suzuki promotes the GSX-R750 on their website, located at,
http://www.suzukimotorcycles.com/sr_02/supersport/fs_gsx750.htm.

“Over the last six years, the Suzuki GSX-R750 has so thoroughly dominated the race track that words can hardly do justice to its accomplishments. In 2001, GSX-R750 riders won a third consecutive AMA Superbike championship. They won the Formula USA Unlimited Superbike series for the second year in a row. And, as if to put an exclamation point on the entire season, GSX-R750 riders absolutely decimated the competition in AMA 750cc

Supersport racing. They not only won an astounding sixth consecutive championship, they took all top-10 positions.

What's the secret to such incredible success? It all begins with integrated design - an approach to R&D pioneered with the development of Suzuki's RGV 500cc GP bike. This philosophy stresses that all components need to be developed as part of a collaborative effort. In the case of the GSX-R750, the compact power plant allows narrower, more aerodynamic bodywork. That in turn allows a more efficient Suzuki Ram Air Direct induction system, which boosts engine performance. Suzuki's engineers are aware that each part affects the whole, and they work together to ensure that each part is integrated for peak performance.

To say that this approach has been successful is beyond a vast understatement. And if you need further proof, one lap of the track on the GSX-R750 will convince you. That's when you'll feel firsthand the engine's phenomenal performance. Crack the throttle, and the fuel injected power plant responds instantly and cleanly. And for 2002, the Suzuki Dual Throttle Valve Fuel Injection system is refined, with direct step-motor control of the secondary throttle valves, so it responds even more precisely than ever. Go ahead and work the crisp-shifting six-speed transmission. In every gear, you're rewarded with exceptional low- and mid-range torque. And the best is yet to come - a breathtaking top-end charge that defines the meaning of supersport performance.

Perhaps the only thrill to match the GSX-R750's engine performance is your feeling of control. Its rigid twin-spar aluminum alloy frame helps it respond to your input instantaneously and precisely in tight chicanes or wide-open sweepers. With a maximum banking angle of 54.5 degrees, you can enter the most radical corners with confidence. Weighing a mere 365 pounds dry, the GSX-R750 also offers precision responsiveness. Both the 43mm inverted forks and the state-of-the-art rear suspension system are fully adjustable. And you can adjust the swingarm pivot height** to suit different track conditions and your particular riding style. If you're serious about supersport racing, there's only one bike for you. The 2002 GSX-R750.”*

Important Dump Truck Information

Mr. Scherdin was driving a 1995 Ford F-800 Dump Truck at the time of the collision. The specific dimensions are as follows,

Overall length	228 inches
Height at rear bed	94 inches
Overall width	96 inches

Wheelbase	154 inches
Lighting	2 tail lights
Reflectors	3 to the rear
Side Mirrors	Two on each side, one conventional rectangular and one small, round, convex.
Brakes	Front Disc, Rear Drum

The dump truck has appropriate mirrors, signals and turn indicators that apparently were working properly at the time of the accident. The investigating officer testified the truck's left turn signal was on when he arrived. No evidence has been submitted to suggest the turn signal was not on at impact.

The dump truck also has a "blind spot" directly behind the truck. Please refer to the drawings and photographs attached as exhibits.

Truck Speed at Impact

Mr. Scherdin testified that after hearing the impact he stopped immediately.

The dump truck's speed at impact was calculated by measuring the distance the truck traveled post impact and allowing reasonable reaction time by Mr. Scherdin.

The dump truck's speed was determined to be 5 miles per hour at the moment the motorcycle struck the rear of the truck.

Any speed greater than 5 miles per hour would place the truck further from the post impact resting point as documented by the investigating officer.

- Given: Truck's Distance from Point of Impact to Rest = 12 ft
- Ending Velocity (Ve) = 0 mph
- Initial Velocity (Vi) = 5 mph or 7.33 fps
- Deceleration Rate = - 18.11 fps/s
- Reaction Time = 1.5 seconds
- Reaction Time Distance = 10.99 ft
- Distance to Stop @ 5 mph = 1.4 ft (Slide Distance)
- Total Distance = 10.99 ft + 1.4 ft = 12.3 ft

$$D = \frac{V_e^2 - V_i^2}{2 a} = \frac{(0)^2 - (7.33)^2}{2 (18.11)} = \frac{53.72}{36.22} = 1.4 \text{ ft}$$

Total Distance to Stop = (Reaction Time Distance) + (Slide Distance) = 12.3 ft

The distance the truck traveled post impact (12 ft) is equal to the truck's distance to stop from 5 mph (12 ft). Therefore, the truck's speed as the motorcycle struck the rear is confirmed to be 5 mph.

Motorcycle Speed Estimates from Skid Marks

Our calculations indicated the “*minimum speed*” required for the motorcycle to skid 215 ft. ranged from,

- 38 mph for no front wheel braking specifically for this Suzuki,
- 47 mph to 51 mph for no front wheel braking on an average motorcycle,
- 69 mph for full front and rear braking on an average motorcycle and,
- 82 mph based on Suzuki's data for this specific motorcycle

The entire “*minimum speed*” range potential is approximately 40-80 mph. The variables considered were the types of motorcycles, the drag factor and the number of wheels skidding.

The following chart summarizes the minimum speed issue.

Skid Distance	Friction Factor	Acceleration	Speed
(feet)	(f)	(ft / sec/sec)	(mph)
215	0.225	-8.05	38.1
215	0.35	-11.27	47.5
215	0.40	-12.88	50.8
215	0.75	-24.15	69.4
215	1.05	-33.95	82.4

- F = 0.225 Based on manufacturer's information that 30% of braking is rear wheel only
- F = 0.35 Based on Northwestern University minimum range for motorcycle rear braking only
- F = 0.40 Based on Northwestern University maximum range for Motorcycle rear braking only
- F = 0.75 Based on Northwestern University maximum for motorcycle with both wheel braking
- F = 1.05 Based on Suzuki data for maximum braking with both wheels

“*Minimum speed*” suggests the actual speed was greater than the range noted due to the fact the motorcycle skid distance, had it not been for the truck, would have continued for some distance.

Our calculated speed values, using Northwestern University formulae, fall within the minimum and maximum range proposed by Suzuki test data. Therefore our analysis is conservative in nature.

Since the posted speed limit in the area was reported to be 35 miles per hour, it is clear the excessive speed of the motorcycle is a contributing factor to the accident.

Motorcycle Distance To Stop

The motorcycle's total distance to stop can be calculated using accepted scientific formulae. The primary variable is the appropriate drag factor. This is shown above in the section concerning the motorcycle's minimum speed from skid marks.

Suzuki publishes data indicating the total distance to stop, for this very high-speed performance motorcycle, is 114 feet from an initial speed of 60 miles/hour. Considering the investigating officer measured a skid distance of 215 feet, or almost twice as far, again strongly suggests the motorcycle was traveling at the higher end of the speed range estimates.

Suzuki also publishes information regarding the actual braking efficiency for this particular motorcycle. Rear wheel braking on the GSX-R750 will produce only about 30 % of the potential stopping power. The front wheel produces about 70 % of the braking power.

“...Inexperienced riders tend to underutilize the front brake. This can cause excessive stopping distance and lead to a collision...” (See *Suzuki Owner's Manual*, p. 43).

Our analysis of the crash and inspection of the motorcycle indicated a very high probability that Mr. Muniz only used the rear tire brake. As a result he was only using about 30% of this particular motorcycle's braking capacity. However, we cannot completely rule out any front wheel braking at this time.

Therefore, either Mr. Muniz was

1. An inexperienced rider who only used his rear brake and that resulted in an excessive stopping distance and ultimately the rear end collision, or,
2. He used the front and rear brake, sliding over 215 feet prior to impact, which would confirm he grossly exceeded the posted speed limit of 35 miles per hour.

I have provided several charts and graphs, attached as exhibits, which breakdown the individual speeds and drag factors.

Protective Gear

A review of the police information confirmed Mr. Muniz was not wearing his helmet, eyeglasses, sunglasses, or motorcycle goggles at the time of the crash.

Suzuki recommends that you buy a helmet and wear it every time you ride. Further, according to Suzuki, helmets do not reduce essential vision or hearing they simply protect the skull.

It is questionable, considering the severity and speed of the actual impact, how much protection Mr. Muniz's helmet would have provided him. However, wearing the helmet could have reduced the severity of the injury to the head. The autopsy report confirmed massive skull injury including virtually an empty cranial cavity.

Suzuki also recommends wearing suitable eyewear to help keep your vision un-blurred by the wind and save the eyes from airborne hazards like bugs, dirt or pebbles kicked up by car tires.

Without protective eyewear and at very high speeds blurred vision must be considered a probable contributing factor.

Rules and Regulations for "Passing"

The Texas Transportation Code defines "pass" or "passing," in reference to a vehicle, means to overtake and proceed past another vehicle moving in the same direction as the passing vehicle or to attempt that maneuver.

In summary, an operator may not drive on the left side of the center of the roadway in passing another vehicle unless the left side is clearly visible and free of approaching traffic for a distance sufficient to permit passing without interfering with the operation of then passed vehicle.

Additionally, an operator may not drive to the left side of the roadway if the operator is approaching within 100 feet of an intersection or railroad grade crossing in a municipality. "*Municipality*" is defined as

“ A legally incorporated or duly authorized association of inhabitants of limited area for local government or other public purposes...a city, towns, township, counties, school district and every kind and character of public corporation which are created by statute or the Constitution of the State, and which are dependent for their support and maintenance from taxes imposed and collected....”

In the case at hand, it is clear Mr. Muniz attempted a passing maneuver within 100 feet of a clearly visible intersection and that he interfered with Mr. Scherdin's left turn while doing so.

Improper Forward Lookout

In Texas, it is generally accepted that the duty to keep proper lookout while driving encompasses the duty to observe, in a careful and intelligent manner, traffic in general situation and vicinity, including the speed and proximity of other vehicles as well as the rules of the road and common experience.

In this case it seems illogical to assume that Mr. Muniz could not see a very large blue dump truck in front of him as he approached. Considering that Mr. Muniz did attempt to pass the truck, ***it is*** logical that he (1) saw the truck and (2) determined the truck was moving very slowly and (3) decided to pass anyway even though the approaching intersection was clearly visible.

It is also generally held in Texas that the driver of a vehicle has no duty to keep proper lookout to the rear except when the driver slows down his vehicle, stops it, changes his course or turns his vehicle, at which time a duty arises.

In this case Mr. Scherdin's duty to Mr. Muniz is to provide ample warning that a change in direction (the left turn) was imminent. According to the testimony from the investigating officer and Mr. Scherdin, his left turn signal was on, working properly at the time and would have been clearly visible to Mr. Muniz. It should be noted that this is a "T" intersection that allowed for only a left turn. A reasonable and prudent trailing driver should anticipate that a slow moving vehicle, approaching a left turn only intersection, may indeed turn left and that any passing maneuver would be very dangerous.

Finally, it is the duty of anyone operating a vehicle upon public roadways to maintain such clear distance behind a preceding vehicle traveling in the same direction so that, should necessity arise, he will be able to slow or even stop without colliding with the preceding vehicle.

In this case it is abundantly clear Mr. Muniz was following too closely and at such speed that he was unable to avoid striking the truck from behind.

Conclusions

It is my expert opinion the primary cause for this motorcycle/truck fatality accident is Mr. Muniz's negligence for attempting an improper passing maneuver when it was unsafe to do so.

Additionally, it is my expert opinion that Mr. Muniz's negligence for failure to allow for an assured clear distance, improper forward lookout, driver impatience, failure to use protective gear, driver inexperience and excessive speed for conditions are significant contributing factors. Mr. Muniz is personally responsible for his own fatal injuries and other damages.

At this time I do not see any negligence issues for Mr. Scherdin as it is my opinion he made a proper left turn, after providing sufficient warning to trailing vehicles, and that he did not have ample time or distance to avoid the collision.

Thank you for this very interesting assignment. Please call if you have any questions or require additional activity on my part.

Respectfully submitted,
Texas Claims & Consulting Co.

Ted Marules, Sr.
President