

IN THE COURT OF CRIMINAL APPEALS OF TENNESSEE
AT NASHVILLE
October 24, 2007 Session

STATE OF TENNESSEE v. TAMELA T. SCOTT

**Appeal from the Circuit Court for Cannon County
No. F05-02 Don Ash, Judge**

No. M2006-02067-CCA-R3-CD - Filed September 17, 2008

The defendant, Tamela T. Scott, was convicted of vehicular homicide by intoxication, a class B felony, and three counts of vehicular assault, a class D felony. She received an effective sentence of eight years. The sentence was ordered to be served by one year in confinement and sixteen years on probation. Among the conditions of the defendant's probation were 200 hours of community service per year, and the defendant was also prohibited from driving for eight years. The defendant appeals the judgments, arguing that (1) the convicting evidence is insufficient; (2) the trial court erred in admitting expert testimony of "retrograde extrapolation" related to the defendant's blood alcohol level; (3) the trial court erred in its jury instruction regarding blood alcohol; and (4) the trial court erred in determining the conditions of her community service, the length of her probation, and that her driving privileges will be revoked for eight years. We affirm the judgments for the three counts of vehicular assault. We affirm the conviction of vehicular homicide by intoxication, but we modify the manner of service of the eight-year sentence to one year in confinement followed by eight years of probation.

**Tenn. R. App. P. 3 Appeal as of Right; Judgments of the Circuit Court Affirmed in Part,
Sentence Modified**

JOSEPH M. TIPTON, P.J., delivered the opinion of the court, in which J.C. MCLIN, J., joined. ROBERT W. WEDEMEYER, J., filed a concurring and dissenting opinion.

Patrick T. McNally, Nashville, Tennessee (on appeal), and V. Michael Fox, Nashville, Tennessee (at trial), for the appellant, Tamela T. Scott.

Robert E. Cooper, Jr., Attorney General and Reporter; Benjamin A. Ball, Assistant Attorney General; William C. Whitesell, Jr., District Attorney General; and David L. Puckett, Assistant District Attorney General, for the appellee, State of Tennessee.

OPINION

This case relates to an automobile accident that caused the death of twelve-year-old Benjamin Leavy and injuries to Richard Leavy, Shaun Leavy, and Susan Koenig. The accident resulted when the defendant's car collided into a car being driven by Richard Leavy. The defendant was charged with two counts of vehicular homicide, three counts of vehicular assault, three counts of aggravated assault, and one count of driving under the influence.

At the trial, the defendant's husband, James Scott, testified that he was working in his repair shop in LaVergne on June 25, 2004, when the defendant crashed her car. He said he found out about the crash when he received a telephone call at 2:00 p.m. from a woman who had come upon the crash scene. He said the last time he talked to his wife before that was at around 10:45 or 11:00 that morning, when he talked to her on the telephone while he was at work and she was at their home in Antioch. He said his wife was preparing to spend the weekend with his ill father-in-law in Bone Cave. Mr. Scott said the route from his home in Antioch to his father-in-law's home outside of McMinnville involved going through Murfreesboro and on Highway 70.

Mr. Scott testified that the last time he saw the defendant before the accident was at 6:30 or 7:00 a.m., before he left home for work. He said the defendant had not had any alcoholic drinks before he left that morning. He said he knew his wife had been prescribed medication for depression but did not know what medication. He said he knew his wife had used cocaine in the past but was not aware of her using cocaine on or around June 25, 2004. Mr. Scott said his wife did not appear to be under the influence of alcohol or drugs when he last saw her that morning. He said that the defendant did not have a habit of drinking alcohol in the morning and that she occasionally had an alcoholic drink with lunch on the weekends. He said he knew the defendant took an over-the-counter pill called Max Brand or Two-Way on occasion.

Mr. Scott went to Stones River Hospital around 3:00 p.m. after the accident and saw his wife there. He said the defendant drove a 1996 BMW, and he identified a photograph of the defendant's car as it looked after the accident.

Richard Leavy testified that he lived in California and that in 2004, he came to Tennessee with his two sons Shaun and Ben to marry his wife Susan and to attend a family reunion. He said that after the reunion, his family went to Fall Creek Falls State Park. On June 25, 2004, Mr. Leavy and his family were on their way from Fall Creek Falls to Nashville when the collision with the defendant occurred. Mr. Leavy said he only remembered driving, enjoying time with his family, and the car spinning into bushes. He said that after the spinning, he remembered Shaun saying he was worried about Ben, hearing sirens, and emergency personnel using a chainsaw to get him out of the car because Mr. Leavy was stuck under the steering wheel. Mr. Leavy said he spent one month in Vanderbilt Hospital, where he had surgery to remove his spleen and part of his pancreas. He said he also had seven broken ribs, a punctured lung, and various deep wounds. After leaving Vanderbilt, Mr. Leavy spent time in a rehabilitation facility in Oakland, California, where he relearned how to walk. Mr. Leavy said he had an additional surgery in California to remove a gall stone and had more

medical procedures planned. About the day of the accident, Mr. Leavy said there was “light drizzle” and that although he could not recall his speed, he always drove within the speed limit.

Mr. Leavy’s wife, Susan Koenig, testified that she came to Tennessee in June 2004 to get married, attend a family reunion, and go on a short family vacation. She said she and Mr. Leavy married on June 19 and went to Fall Creek Falls on June 21. On June 25, they were traveling from Fall Creek Falls to Nashville when the collision with the defendant occurred. Ms. Koenig said she had fallen asleep during the drive and awoke after the collision. She said that when she awoke, she realized that her leg was broken and that the car had been in an accident. She said her husband had been driving, Ben was sitting in the back seat behind him, and Shaun was sitting in the back seat behind her. She said she could not see in the back seat when she first woke up but that she heard Shaun talking about Ben and saying “He’s really bad.” Ms. Koenig tried to get out of the car but was too dizzy. She said that a woman and man came to the car and that the man stayed with her until she was put on a stretcher. The next thing Ms. Koenig remembered was being flown to Vanderbilt Hospital, where she stayed for four weeks. She said she suffered a broken leg, two broken ribs, a broken bone in her foot, and various bruises. She said she had two surgeries on her broken leg. She said she learned about Ben’s death the Saturday after the accident. She said she and her husband flew to California after he was released from the hospital. She said she continued having treatment for her leg.

Ms. Koenig described the weather before the collision as “overcast” and “a little bit drizzly.” She said she was not sure of Mr. Leavy’s speed but said he was a very safe driver. After Ms. Koenig’s testimony, the state and defendant announced that they were stipulating to the fact that Richard Leavy, Shaun Leavy, and Ms. Koenig suffered serious bodily injuries as a result of the collision.

Glenda Holland testified that she was a registered nurse working in McMinnville in Cannon County. She said she was driving to work on Highway 70 on June 25, 2004. She said it had been sprinkling off and on and that the roadway was wet “in spots.” She said she was driving behind the Leavy car for about fifteen or twenty minutes. She said she suddenly saw a white BMW cross the white lines of the lane and in front of the Leavy car. She said the collision happened very quickly. She said she did not see any water running across the road where the collision occurred. She said she did not have difficulty driving that day and estimated that the Leavy car was driving fifty to fifty-five miles per hour.

Ms. Holland said she stopped her car and ran to the Leavy car. She said she checked on the driver, who was breathing and saw behind the driver a young man who was beginning to have a seizure and whose nose was bleeding. She said another woman who stopped to help was using a shirt to catch the blood. Ms. Holland went to the passenger’s side of the car and saw that the woman in the passenger’s seat was breathing and that a young man behind her appeared to be in the best condition of the occupants. She said she went to the white BMW and talked to the defendant, who was the driver. The defendant said she was “okay.” Ms. Holland said she did not smell any alcohol on the defendant. She said a small white dog was also in the defendant’s car and was not in a cage.

Ms. Holland testified that in her brief encounter with the defendant, she had no indication that the defendant had been using drugs or alcohol. She acknowledged that she was not looking for indications of drug or alcohol use but said she would have recognized a problem if, for instance, the defendant's speech had been slurred.

Angela Haley testified that on June 25, 2004, she was driving on Highway 70 to Murfreesboro to celebrate her birthday when she witnessed the wreck of the Leavy car sometime before 2:00 p.m. She said the first thing she saw was the Leavy car crashing into a rock wall. She did not see the white BMW. She described the road conditions as "slick" and "wet" but not "drenched." She said that stretch of Highway 70 had one lane for westbound traffic and two lanes for eastbound traffic. Ms. Haley said that she stopped her car to check on the Leavy family. She said she spoke to Mr. Leavy, who was driving, and tried to speak to Ben, who was sitting behind Mr. Leavy. She said she was with them for about ten minutes until an ambulance arrived. She said she walked to the defendant's car but did not speak to the defendant. She was five to ten feet from the defendant's car and did not notice any evidence of the defendant's impairment. She said she saw a dog in the defendant's car. She said she also saw the defendant later in the hospital, when the defendant was being released, and did not notice anything unusual about the defendant's demeanor.

Samantha Roach testified that she was on the road to take her niece, Angela Haley, to dinner when she witnessed the collision between the defendant and the Leavy family. She said the road was damp but did not have standing water. She said she was driving downhill when she saw the defendant's car approaching in the opposite direction. She said it looked like the car was trying to make a left turn, although there were no roads on the left. She said the defendant's car turned left and collided into the Leavy car. She said that the Leavy car was thrown into the side of the mountain and that the defendant's car stopped in the middle of the road after spinning about 360 degrees. Ms. Roach stopped her car, which she said she had no trouble doing, and ran to the defendant's car. She saw a small dog in the defendant's car, which was not in a cage, and saw the defendant searching for her cellular telephone. Ms. Roach offered to call the defendant's husband for her. Ms. Roach said she did not smell alcohol on the defendant, but she said she was not very close to the defendant. She said that after she saw that the defendant's condition was fine, she went to the other car, where she saw that the youngest boy in the backseat needed medical attention. Ms. Roach said she had EMT training and assisted with Ben until paramedics arrived. Ms. Roach testified that she had no problems understanding the defendant. She said that the defendant appeared to be disoriented but that, in her experience as a firefighter, it was not unusual for someone involved in a wreck to be disoriented.

Thomas Cantrell testified that on June 25, 2004, he was riding in a car driven by his son when he witnessed the collision between the defendant and the Leavy family. He said that he was going toward Murfreesboro and that coming downhill, he had just passed a stock barn when he saw the defendant's BMW lose control and turn in front of the Leavy car, which he said was a small gold Ford. About the defendant's car, he said, "It looked like some imaginary hand just grabbed it and turned it sideways." He said the Ford ran off the road on the right. Mr. Cantrell's son stopped his car and ran to the aid of the Leavy family. Mr. Cantrell said his son did not have difficulty stopping

the car. Mr. Cantrell later joined his son at the side of the Leavy car and spoke with the woman in the car. Mr. Cantrell did not remember any standing water on the road. He said he did not have a conversation with the defendant but did see her and did not notice anything unusual about her behavior.

The state and defendant stipulated that the Cannon County Sheriff's Department received a call at 1:52 p.m. on June 25, 2004, regarding a traffic collision involving injuries that happened on Highway 70-East. They also stipulated that the custodian of the records of Marti and Liz Shoes in Murfreesboro would have testified that the defendant made a purchase at the store on June 24, 2004, at 1:26 p.m. Also stipulated was that the defendant's weight, as listed on a driver's license she received in November 2002, was 131 pounds.

Cindy Weaver and Tammy Turner both testified that they were working in the x-ray room of Stones River Hospital on June 25, 2004, when the defendant was taken in for x-rays following a traffic accident. They testified that the defendant was transported from the emergency room to the x-ray room on a stretcher. They both said they smelled alcohol on the defendant. However, neither one noted the smell in the defendant's file or told anyone else in the hospital about it until they spoke with police a few days later. Neither said they noticed any other signs that the defendant was impaired, although both said they were focused on performing x-rays, not on whether the defendant was impaired.

Dr. Gary Bryant testified that he was working in the emergency room at Stones River Hospital on June 25, 2004, when the defendant and the Leavy family arrived after their collision. He said four of the five people injured in the collision were taken to Vanderbilt Hospital because of the seriousness of their injuries. He said that the defendant was the least injured and that he ordered her to have x-rays done. He treated her injuries, which included head injuries, minor lacerations on the back of her head, abrasions on her hands and elsewhere, and a deformity on her right forearm. Dr. Bryant requested a drug and alcohol test be performed on the defendant. He said he could not recall smelling alcohol on the defendant during his interactions with her. He said that the emergency room was busy that day and that he was not concentrating at the time on whether anyone was under the influence.

On cross-examination, Dr. Bryant testified that he initially spent about five or ten minutes with the defendant and did not notice any signs or symptoms of alcohol or drug impairment. However, he said it would be difficult to notice signs of impairment from someone who was immobilized, as the defendant was. He said that the defendant was responsive and that he did not have difficulty understanding her. He did not recall anything unusual about her pupil size, body temperature, or blood pressure. He said the defendant arrived at the hospital about 2:45 p.m. Dr. Bryant said he normally would note in a patient's medical report any suspicion of drug or alcohol use if it was pertinent to the person's treatment but that he did not make any such notes in the defendant's report. He said he ordered alcohol and drug tests because someone, possibly the x-ray technician, told him she smelled alcohol on the defendant's breath. He said the tests performed on the defendant were a urine drug screen and a blood alcohol test. He said that the drug screen could

not quantitatively indicate how much drugs were in a person's body but that the blood test indicated a quantitative amount of alcohol in the blood. He said that the defendant was in the emergency room about three hours and that he observed her walking before she left. Dr. Bryant reviewed the defendant's emergency room physician's report and noted there was nothing in it regarding the defendant having used alcohol or drugs. He did note that the defendant exhibited mood swings during his treatment of her, which he said was not unusual for someone involved in a serious car accident. He said there was nothing obvious about the defendant's condition that indicated to him that she was under the influence of anything. On re-direct examination, Dr. Bryant testified that the defendant's medical record indicated that the defendant was taking the medication Lexapro, which is used to treat depression and mood disorders. He said he had no reason to believe the defendant was taking Lexapro for anything other than therapeutic reasons. He said that Lexapro could possibly exaggerate the symptoms of impairment but that he did not notice any clinical signs or symptoms of impairment from the defendant.

Tabitha Smith testified that she was the director of nursing at Stones River Hospital and that she was working on June 25, 2004. She said the emergency room was very busy that day. She said she came into contact with the defendant after the two Leavy youths were flown to Vanderbilt. She said the defendant was admitted to the hospital at 2:45 p.m. She did not recall whether she smelled alcohol on the defendant. She reviewed a statement she gave to Trooper Stan Hollandsworth on June 30 that stated she noted a "faint odor" of alcohol on the defendant. She described the defendant as being "emotionally labile." She noted a document dated June 25, 2004, which indicated that blood was drawn from the defendant on that date at 5:33 p.m. She said that there were no alcoholic beverages in the emergency room and that she did not see the defendant drinking alcohol while in the hospital.

Ms. Smith testified that she had "intermittent contact" with the defendant between 2:45 p.m. and about 6:00 p.m. She said she did not have any trouble understanding the defendant during their conversations. She identified her notes regarding her observations of the defendant that day and stated that the notes reflected that the defendant's skin sensation was strong, that her skin was warm and dry and a normal color, that her pulse was strong, and that the defendant was able to function independently. No medical history was noted. She said she most likely would have indicated on the notes if the defendant appeared to be impaired by any substance. She acknowledged that the notes did not include anything about the odor of alcohol. She said the first time she reported the smell of alcohol was when troopers got her statement a few days later, which indicated a "faint odor." Her notes indicated that the defendant's blood pressure and respiration were normal, while her pulse was "a little rapid," which was acceptable considering her anxiety. Ms. Smith testified that clinical signs of impairment included variances in behavior and that the defendant's behavior was not consistent. He said the defendant was at times hysterical. She said the only time she saw the defendant walking was from the bed to a wheelchair beside the bed. She acknowledged that but for the slight odor of alcohol detected on the defendant, she had no reason to believe the defendant was under the influence of any substance.

Dawn King Swiney testified as an expert in the field of toxicology. She worked as a toxicologist with the Tennessee Bureau of Investigation (TBI) and performed a blood alcohol test on a sample of the defendant's blood drawn at 5:33 p.m. on June 25, 2004. She said the report indicated that the defendant's blood-alcohol percentage was .04 percent, which was below the legal limit for driving of .08 percent. On cross-examination, Swiney testified that on any given day, she performed blood tests on approximately 100 samples. She said the margin of error on the blood alcohol test in this case would translate to .002 percent blood-alcohol content, or a range of .038 to .042 percent.

TBI toxicologist Jeff Crews also testified as an expert in the field of toxicology. He said he performed a drug analysis on a sample of the defendant's blood that was taken on June 25, 2004, at 5:33 p.m. His report indicated that the defendant's blood contained less than .05 micrograms per milliliter of the following chemicals: cocaethylen, a compound formed from cocaine and ethyl alcohol; ecgonine methyl ester, a metabolite formed from the breakdown of cocaine; cocaine; and Citalopram, an anti-depressant. In addition, the defendant's blood tested positive for lidocaine, a local anesthetic commonly used in emergency rooms, and ephedrine and/or pseudoephedrine, a chemical found in over-the-counter cold medications. He said the defendant's blood tested negative for barbiturates, benzodiazepine, cannabinoid, and opiates. He explained that .05 micrograms per milliliter was the smallest unit that his instrument measured. He said he could not determine when the defendant would have taken the drugs that were found in her system.

Donna Dodd testified that she was a laboratory technician at Stones River Hospital and that on June 25, 2004, Dr. Bryant requested that she run an alcohol analysis on the defendant's blood sample. Ms. Dodd collected the sample at 4:50 p.m. and received it in the lab at 4:55 p.m. She said she also performed a drug screen of the defendant's urine. She said the results of the drug screen report were that the defendant's urine tested negative for PCP, benzos, opiates, barbiturates, and T.C.A. and positive for cocaine and amphetamines. The result of the blood alcohol analysis was .076 percent. She explained that just the serum of the defendant's blood was tested, not the whole sample of blood, and that whole blood samples were not tested in her lab. She said she did not notice any signs or symptoms of impairment when she drew blood from the defendant.

Tennessee Department of Safety Trooper Stan Hollandsworth testified that he was dispatched to the scene of a personal injury traffic accident on June 25, 2004, at 2:01 p.m. on Highway 70. He arrived at 2:08 and observed the two cars involved in the collision, the defendant's white BMW and the Leavy family's Ford Taurus. He said he spoke to the defendant while the defendant was in an ambulance and said the defendant told him she lost control of her car and hit another vehicle. Trooper Hollandsworth said he did not smell alcohol on the defendant at that time because he was about a stretcher's length away from her.

Trooper Hollandsworth identified pictures of the crash scene and said the collision occurred in the westbound lane of Highway 70, where the road goes downhill. He said that the eastbound side of Highway 70 had two lanes and that the road curves to the right coming uphill in the area of the crash. He said that road conditions were wet that day but that he did not see any standing water on

the road. He looked into the cars involved in the collision and did not see any alcoholic beverages or beverage containers.

Trooper Hollandsworth testified that he left the scene at 4:09 p.m. and went to Stones River Hospital. He said someone in the emergency room informed him that the defendant smelled of alcohol. He said that he talked to the defendant in the hospital after she was brought out of the x-ray room and that she told him she did not drink alcohol or take any illegal drugs, although she did say she took anti-depressants. He said the defendant told him that she left her house at about noon, on her way to visit her father in Bone Cave, and that she stopped at Marti and Liz's shoe store in Murfreesboro on the way. Trooper Hollandsworth said he could smell alcohol on the defendant when he spoke to her at the hospital. He said that he asked the defendant again if she had anything to drink that day and that she told him she drank one beer before she left home. He asked the defendant to submit blood samples, which she agreed to do.

Trooper Hollandsworth testified that in the days following the collision, he spoke to Ms. Koenig and other witnesses and obtained statements. He said he and Trooper Monty Terry also obtained a written statement from the defendant. He said he went to Cozumel's restaurant in Smyrna to obtain documentation that the defendant was there but was unable to do so. He also went to Marti and Liz's shoe store in Murfreesboro, where he obtained a sales receipt indicating that the defendant purchased shoes there on June 25, 2004, at 1:26 p.m. On Friday, July 29, 2005, Trooper Hollandsworth drove from the Marti and Liz's store to the crash scene to time the drive. He said that he left Marti and Liz's at 1:26 p.m., the same time the defendant made her purchases there on June 25. He said that he drove the posted speed limit and that it took him thirty-four minutes and forty-three seconds to arrive at the crash scene. In comparison, he said the dispatch regarding the crash on July 25, 2004, was received at 1:52 p.m., twenty-six minutes after 1:26. Trooper Hollandsworth also later measured the distance and time of travel between Cozumel's in Smyrna and Marti and Liz's. He said he left Cozumel's at 11:35 p.m. and, driving the posted speed limit, arrived at Marti and Liz's twenty minutes and thirty-six seconds later. Trooper Hollandsworth testified that he made a videotape on October 13, 2005, showing the location of the crash while driving eastbound down Highway 70. The video was shown to the jury.

On cross-examination, Trooper Hollandsworth testified that no witnesses he interviewed at the scene of the crash had evidence implicating drugs or alcohol in the crash. He said he had no difficulty understanding the defendant when he talked to her at the scene. He acknowledged that his initial impression was that the accident was caused by the defendant losing control of her car. He said the first time he had any indication alcohol or drugs were involved was when someone in the hospital told him she smelled alcohol on the defendant. After this, he talked to the defendant and said he also noticed an odor of alcohol. He said that this observation, combined with the defendant's mood and actions in the emergency room, led him to suspect the defendant had been driving while under the influence. He said someone showed him the report on the blood alcohol test that was performed at the hospital before he asked the defendant to submit blood samples for the TBI to analyze. He said that the defendant's speech was not slurred and that he did not perform any field sobriety tests on her because she was in a wheelchair due to her injuries. He acknowledged the

existence of field sobriety tests that did not require physical tasks but said he was not trained to perform those tests. He also acknowledged that the defendant was cooperative with him and not belligerent.

Trooper Hollandsworth testified that he did not note the defendant's behavior in the emergency room in any reports. He said he did relate the defendant's statements to him in the hospital in an investigative summary report he prepared sometime after July 2. Regarding the accident report filed the date of the incident, Trooper Hollandsworth acknowledged that the only "contributory action" of the defendant that was marked was "failure to keep in proper lane or running off road." He said he had no evidence at the time of careless or reckless driving on the part of the defendant. He said he did amend the report later to add the results of the defendant's blood alcohol test.

Trooper Hollandsworth acknowledged that he did not know the actual route the defendant had taken from the shoe store to the crash scene and that he did not know how many traffic lights had stopped the defendant along the way. He said that there was "intermittent rain" at the time of the crash and that the roadway was wet. He said a car could hydroplane on a road if there were standing water. He said no one told him the defendant's car hydroplaned. He said that he approached the scene of the crash with his sirens and blue lights on and driving above the speed limit but that he did not have difficulty driving. He said he formed his initial impression that the crash was caused by the defendant losing control of her vehicle before he obtained statements from witnesses, got the defendant's written statement, and obtained the results of the defendant's blood test. In the investigative summary report, he noted that alcohol was involved in the crash. Trooper Hollandsworth said that although one of the tires had come off the defendant's car after the crash, there was no evidence that the tire "blew out" before the crash occurred. He said that the tire was flat because of the crash and that a photograph showed that the tread on the tire was good.

Dan Hollis testified that he worked in the criminal investigations division of the Tennessee Highway Patrol. He went with Trooper Hollandsworth to the defendant's residence on June 29, 2004. He said that the defendant did not answer the door right away but that he did receive an answer when he called her on the telephone. He said the defendant invited them into her house and gave the following statement, which he transcribed:

I got up Friday morning and went to Smyrna to the Cozumells [sic] restaurant. I ate by myself. I then went to the Marty & Liz shoe store in Murfreesboro. I bought 5 pair of shoes. I paid by debit card. I left enroute to Bone Cave to visit my father. It was raining and the road was wet. It was not raining that hard. I was not driving fast. I felt my car sliding to the right. I had drank 2 (two) Bud Lights at the Mexican Restaurant (Cozumel's). I had taken 30 mg of Lexapro that morning, one 20 mg tablet [and] one 10 mg tablet. I had also taken two (2) "Two-Way" Max Brand tablets. (Ephedrine Hyro Chloride

[sic] and Gaufensin). The Two-Way can be purchased at Mapco stations.

Trooper Hollis said the defendant read over the statement, which was signed by the defendant. He said the defendant signed a form stating that she gave the statement of her own free will. He said that after obtaining the defendant's statement, he and Trooper Hollandsworth went to Cozumel's in Smyrna and Marti and Liz's shoe store in Murfreesboro to obtain documentation that the defendant was there on June 25. He said they were able to obtain the defendant's sales receipt from the shoe store but were not able to get any documentation from Cozumel's.

On cross-examination, Trooper Hollis testified that when he first began assisting in the investigation of the case, he was advised that alcohol may have been involved. He said that when he and Trooper Hollandsworth went to speak to the defendant, they did not tell her they were investigating a possible vehicular homicide. He said that he did not know if the defendant was under the influence of drugs or alcohol when she made the statement and that he did not ask her. He said he did not provide the defendant with Miranda warnings but did have her sign a form saying her statement was given voluntarily. He said he did not make any notes regarding his visit to Cozumel's. He said they did not have a picture of the defendant when they went to Cozumel's. He acknowledged that he would only have been able to obtain a credit or debit card receipt of the defendant's purchase there, not a cash receipt.

Dr. Kenneth Ferslew testified as an expert in the field of forensic toxicology. He testified that he received information regarding this case, including medical records, the investigator's report, TBI results, hospital testing results, and witness statements. He said he reviewed this material to evaluate the effects, if any, that drugs and alcohol had in this case. He said that to determine this, he generally looked for three factors: "misoperation" of the vehicle, an assessment of the individual's level of impairment, and what drugs or alcohol were found in the person's system. He said that in this case, he was missing a clinical assessment regarding the defendant's impairment. He said he determined that there was "misoperation" of the defendant's vehicle in that she lost control of the car. He said he reviewed results of the drug and alcohol tests performed on the defendant and determined that the defendant's serum alcohol level of .076 percent, as reported on the test performed at the hospital, would be equivalent to a whole blood alcohol level of .065 percent. The test performed by TBI using a blood sample that was taken later indicated a blood alcohol concentration of .04. He said this indicated that the defendant's blood alcohol level had decreased over time. A drug screen performed on the defendant was positive for amphetamines and cocaine, as well as other substances. Dr. Ferslew also took into account the defendant's statements regarding her alcohol consumption (one beer at home and two beers at lunch), the medications she had taken that day, and when she ate lunch, as well as the defendant's weight. He said food can delay the absorption of alcohol in one's body. He said that pharmacokinetic extrapolation, or retrograde extrapolation, was a device used in forensics to use the evidence one has to predict what a person's blood alcohol level was before the evidence was gathered. He said that based on the evidence he had in this case, he predicted the defendant's blood alcohol level at the time of the crash was .102 percent.

Dr. Ferslew testified that the defendant's testing positive for methamphetamine was probably due to her having taken the Max Brand tablets, which contained ephedrine. He said the results of the drug screens performed on the defendant indicated the presence of cocaine in her body. He said the blood test analyzed by the TBI was more helpful than the urine screen done at the hospital because the former indicated what chemicals were circulating in the defendant's blood and, therefore, what was going to her brain. He said that combining alcohol with cocaine prolonged the "euphoria of the cocaine" and that people often combine the two for that reason. He said it was common for people to "misoperate" vehicles when they have taken alcohol and cocaine together. He said that Citalopram was an anti-depressant and "mood elevator" that, while not harmful itself, can lead to decreased attentiveness and alertness when combined with alcohol. Dr. Ferslew opined that the defendant had drugs in her system, which affected her motor and mental performances and contributed to her "misoperation" of the car at the time of the crash.

On cross-examination, Dr. Ferslew testified that although he reviewed the accident report relevant to this case, he did not have experience in accident reconstruction, did not visit the accident scene, did not physically examine the cars involved, and did not personally speak to any witnesses. He acknowledged that he had no assessment of the defendant's actual level of impairment at the time. He acknowledged that he would expect someone with a .102 percent blood alcohol level to exhibit signs and symptoms of impairment but that there was no evidence of the defendant's impairment. He said an odor of alcohol was not itself indication of impairment. He said he would expect someone with a blood alcohol level of .102 percent to have the following symptoms of impairment: an "expansion of their personality" and exaggeration of emotions, loss of attention, loss of cognitive skills, and loss of motor skills. He acknowledged there was no assessment of these factors relative to the defendant.

Dr. Ferslew testified that he had to rely on assumptions to determine the retrograde extrapolation in this case because he did not have data on all the relevant variables. He acknowledged that he made assumptions about the time the defendant ate lunch, the number of drinks she had, and the food she had in her stomach, but he said that he based his assumptions on the defendant's statements that he reviewed. He acknowledged that the Citalopram in the defendant's system was not indicative of any abuse of the drug.

Dr. Ferslew described cocaine as an "accelerant" that caused exaggerated mood elevations and euphoria. He said that although there were reports that the defendant was crying and distraught after the crash, given the circumstances, it would have been difficult to distinguish the effects of drugs from the effects of trauma. He said the fact that the defendant was injured and traumatized removed the assessment prong of his evaluation of the defendant's impairment, but he still felt comfortable making his evaluation. He acknowledged other possible contributions to the crash, including wet road conditions and tire wear. He said that he could not conclude that but for alcohol and cocaine the crash would not have happened. He said that the defendant's blood alcohol level could have been as low as .073 percent, if the defendant had the lowest metabolic rate possible, but that he did not think that figure was logical. He said her blood alcohol level could have been as high as .168 percent. However, he said that in his expert opinion, based on the defendant's statements

regarding what she had to drink that day, the measurements of her blood alcohol level that were taken, and assumptions that she had normal alcohol elimination rates, the defendant's blood alcohol level at the time of the crash was .102 percent. He said this figure did not take into account the possible effects of cocaine.

Dr. Ferslew testified that alcohol impairs judgment and delays reaction. He said no assessments of the defendant's reaction time were performed at the hospital. He said that a person who tolerates alcohol well and does not appear drunk with a .102 level can still have altered judgment and psychomotor functioning due to the alcohol. He said that the defendant's whole alcohol level of .065 at 4:50 p.m. was not consistent with how many drinks she claimed to have had that day. He said she either drank more alcohol or drank alcohol for a longer period of time than she had reported. Dr. Ferslew testified that only a few milligrams or micrograms of cocaine were needed to get "high" and that a "psychological crash" followed the cocaine "high." He estimated that based on the levels of cocaine and metabolites found in the defendant's body, the defendant had taken cocaine four to six hours before the accident. He said that cocaine can remain active in a person's system for varying lengths of time, depending on how much cocaine was used. He could not determine how much cocaine the defendant used.

Trooper Monty Terry testified that he assisted Trooper Hollandsworth in the investigation of the crash involving the defendant and the Leavy family. He said that the roads were wet but that there was no standing water on the road. He said he went to the emergency room at 4:24 that afternoon. He said he smelled alcohol on the defendant. He was present when Trooper Hollandsworth interviewed the defendant in the hospital and said she told them she had taken anti-depressant medications that day but denied drinking any alcohol. He said she later admitted drinking a beer before leaving her house in the morning. On cross-examination, he testified that he did not have any reason to believe alcohol or drugs were involved in the accident when he was at the scene. He said the defendant's speech was not slurred. He said the defendant was not belligerent and was alert, although she was evasive in her answers. He said he had no reason to think the defendant had taken any substance other than alcohol.

Trooper James Mercer testified that he worked with the Highway Patrol's Critical Incident Response Team. He assisted in the investigation of the crash involving the defendant and the Leavy family. He mapped the scene of the accident and identified diagrams that he prepared. He said he did not observe any skid marks, shadow marks, or yaw marks, which precluded him from calculating the speed of the vehicles. He said he measured the tread on the tires of the defendant's car and said he did not notice any uneven wear on the tires. He also did not see any indication that any of the tires had blown out. On cross-examination, Trooper Mercer testified that when he was asked to assist in the investigation, he was asked to gather evidence for a potential vehicular homicide charge. He said he did not measure the tires when he initially began investigating the case because he did not think it was important to the investigation.

The defense called Bryan Madewell, who testified that on June 25, 2004, he was working as a paramedic in Cannon County. He responded to the scene of the collision between the defendant's

car and the Leavy car. He said the defendant was a patient in his ambulance. He said he talked to her and did not have difficulty understanding her. He said she responded to his questions appropriately. He recorded his observations of the accident scene and of the defendant. In his report, he noted that the defendant had multiple lacerations and minor bleeding, that her pupils were equal and reactive to light, and that she was breathing well. He said he spent about five minutes with her. Mr. Madewell said he had been an EMT since 1992 and had worked with several accidents, including some that involved alcohol and/or drugs. He said that he would have noted in his report if he had smelled alcohol on the defendant but that he did not smell alcohol. On cross-examination, Mr. Madewell noted that he took the defendant to the hospital at 2:45 p.m. He said he did not know what the defendant was doing before his arrival on the scene. He acknowledged that he was the paramedic who filled out the report on the defendant even though he was not the one who spent the longest amount of time with her. He said she reported that she was not on any medications. He said the defendant also did not mention any allergies or past medical problems. He said the closest he was to the defendant was two feet.

Based on the above evidence, the jury found the defendant guilty of the vehicular homicide of Ben Leavy; vehicular assault of Richard Leavy, Shaun Leavy, and Susan Koenig; and DUI. The trial court merged the DUI conviction into the vehicular homicide conviction.

I. SUFFICIENCY OF THE EVIDENCE

The defendant challenges the sufficiency of the convicting evidence. She argues that the evidence does not show that she was impaired and that alcohol and drugs contributed to the accident. The state counters that sufficient evidence exists to support the convictions.

Our standard of review when the sufficiency of the evidence is questioned on appeal is “whether, after viewing the evidence in the light most favorable to the prosecution, any rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt.” Jackson v. Virginia, 443 U.S. 307, 319, 99 S. Ct. 2781, 2789 (1979). This means that we do not reweigh the evidence but presume that the jury has resolved all conflicts in the testimony and drawn all reasonable inferences from the evidence in favor of the state. See State v. Sheffield, 676 S.W.2d 542, 547 (Tenn. 1984); State v. Cabbage, 571 S.W.2d 832, 835 (Tenn. 1978). Questions regarding witness credibility, conflicts in testimony, and the weight and value to be given to evidence were resolved by the jury. See State v. Bland, 958 S.W.2d 651, 659 (Tenn. 1997).

The defendant was convicted of vehicular homicide, which is defined, in pertinent part, as “the reckless killing of another by the operation of an automobile, airplane, motorboat or other motor vehicle, as the proximate result of . . . [t]he driver’s intoxication, as set forth in § 55-10-401.” T.C.A. § 39-13-213(a)(2). The defendant was also convicted of three counts of vehicular assault, which occurs when a person, “as the proximate result of the person’s intoxication as set forth in § 55-10-401, recklessly causes serious bodily injury to another person by the operation of a motor vehicle.” Id. § 39-13-106(a). Both statutes state that “‘intoxication’ includes alcohol intoxication as defined by § 55-10-408, drug intoxication, or both.” Id. §§ 39-13-106(a), -213(a)(2). Section 55-

10-408 provides that “evidence that there was, at the time alleged, eight-hundredths of one percent (.08%) or more by weight of alcohol in the defendant’s blood shall create a presumption that the defendant’s ability to drive was sufficiently impaired thereby to constitute a violation of § 55-10-401(a)(1).”

In the light most favorable to the state, the evidence in the present case shows that the defendant lost control of her car and struck the car being driven by Richard Leavy. The collision resulted in the death of Ben Leavy and serious bodily injury to Richard Leavy, Shaun Leavy, and Susan Koenig. At least four people smelled alcohol on the defendant when she was at the hospital that day. The defendant gave conflicting accounts of what she had to drink that day—initially stating that she drank one beer before leaving home in the morning and later stating that she drank two beers during lunch. The collision occurred shortly before 2:00 p.m. Blood tests showed that the defendant’s blood alcohol content was .065 percent at 4:50 p.m. and .04 percent at 5:33 p.m. The state presented expert evidence that these levels indicated the defendant’s blood alcohol content was .102 percent at the time of the collision and that the defendant had more to drink than she stated to officers. In addition, drug tests indicated that the defendant had cocaine and other chemicals in her body. The state’s expert testified that in his opinion, the alcohol and cocaine in the defendant’s system contributed to her “misoperation” of her car.

The defense highlighted evidence showing that the defendant did not act impaired, that witnesses did not note clinical signs and symptoms of impairment, and that the wet road conditions could have been the cause of the collision. The defense also called into question the credibility of the state’s expert testimony regarding the defendant’s blood alcohol content. Despite this, the jury chose to accredit the state’s evidence, which was sufficient to support the convictions. The evidence is sufficient.

II. EXPERT EVIDENCE OF RETROGRADE EXTRAPOLATION

The defendant contends that the trial court erred in allowing Dr. Ferslew to offer expert opinion testimony, using the process of retrograde extrapolation, about the defendant’s blood alcohol content at the time of the wreck. The state argues that the trial court did not abuse its discretion in admitting the testimony.

The defendant does not challenge on appeal the admissibility of retrograde extrapolation evidence in every case or the qualifications of Dr. Ferslew as an expert on retrograde extrapolation in general. The issue of the reliability of the science of retrograde extrapolation in general, as opposed to in the present case, is not before us. Cf. State v. Thomas W. Cothran, M2005-00559-CCA-R3-CD, Hickman County (Tenn. Crim. App. Nov. 29, 2005), app. denied (Tenn. 2006); State v. Greenwood, 115 S.W.3d 527 (Tenn. Crim. App. 2003) (holding that the state was not required to introduce retrograde extrapolation evidence and contemplating that defendant might introduce such proof to rebut the state’s case, but not addressing whether, as a general proposition, such evidence was sufficiently reliable to gain admission).

Rules 702 and 703 of the Tennessee Rules of Evidence address the admissibility of opinion testimony of expert witnesses. Rule 702 states in pertinent part: “If scientific, technical, or other specialized knowledge will substantially assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise.” Tennessee Rule of Evidence 703 requires the expert’s opinion to be supported by trustworthy facts or data “of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.” The determining factor is “whether the witness’s qualifications authorize him or her to give an informed opinion on the subject at issue.” State v. Stevens, 78 S.W.3d 817, 834 (Tenn. 2002). Evidence constitutes “‘scientific, technical, or other specialized knowledge,’ if it concerns a matter that ‘the average juror would not know, as a matter of course.’” State v. Murphy, 953 S.W.2d 200, 203 (Tenn. 1997) (quoting State v. Bolin, 922 S.W.2d 870, 874 (Tenn. 1996)). Questions regarding the admissibility, qualifications, relevancy, and competency of expert testimony are left to the discretion of the trial court. McDaniel v. CSX Transp., Inc., 955 S.W.2d 257, 263-64 (Tenn. 1997). A trial court’s ruling on the admissibility of such evidence may be overturned on appeal only if the discretion is exercised arbitrarily or abused. Stevens, 78 S.W.3d at 832.

Our review of Dr. Ferslew’s testimony incorporates both his testimony at the hearing on the motion in limine and at the trial. Cf. State v. Hanning, 975 S.W.2d 290, 297-98 (Tenn. 1998) (holding that appellate court reviewing a motion to suppress evidence should consider the evidence adduced both at the suppression hearing and at trial). Dr. Ferslew testified about his expert qualifications; the factual basis he used in formulating his opinion, including the facts upon which he relied in performing his retrograde extrapolation analysis; and his opinions regarding the defendant’s level of intoxication and whether she was impaired at the time of the offense.

Dr. Ferslew testified that he was asked to “evaluate the effects of drugs and alcohol . . . and come up with an opinion as to whether alcohol or drugs were involved with [the defendant] in her operation of the vehicle or this crash.” He said the process of making a determination of whether the defendant was impaired at the time of the offenses involved a triad:

The triad is a three-pronged approach to knowing whether someone is impaired by drugs while they’re operating a vehicle. The first part of the triad is to see was there misoperation of the vehicle. We look at the crash report. We look at other things that would give us evidence that someone misoperated the vehicle. The second thing we look for is was there an assessment of that individual. Sometimes there’s—the severity of the crash is so severe that there’s not. But many times there’s a field sobriety assessment or a clinical assessment of that individual. And we want to see what kind of effects they may exhibit at that time. The third part of the triad is to then look at what drugs or alcohol was found in their system when a sample was taken to see if it explains their motor effects or how they were acting and does that effect correlate with the misoperation of the

vehicle. In other words, do all the parts fit together. And that's what I was asked to do in this case considering the evidence that was available.

Dr. Ferslew testified that he reviewed an investigator's report, medical records, TBI reports, toxicology reports, the accident report, and witness statements that were provided by the district attorney's office. He said that information regarding the time and quantity of alcohol consumption, whether the defendant had eaten, the defendant's body weight, and the defendant's ingestion capacity were considered as part of the analysis.

With respect to the first prong of the triad, Dr. Ferslew testified that he was provided with information that the defendant lost control of her car, crossed the double yellow line, and hit the victims' car. He conceded that he was not provided with any information regarding the second prong of the triad involving clinical signs and symptoms of impairment.

Dr. Ferslew testified in detail about the third prong of the triad—drug or alcohol test results and correlation with vehicle misoperation. Dr. Ferslew considered the two blood test results from samples taken following the 1:52 p.m. collision. The 4:50 p.m. sample, when converted to a whole blood value, revealed a blood alcohol level of 0.065, and the 5:33 p.m. sample revealed a level of 0.04. Dr. Ferslew explained the variables he considered:

. . . I looked at this and I said what makes sense here. With her body weight and what she says she consumed and the delay in the draw of those samples because we got those samples so much later and because they were decreasing she was in an elimination phase between those two samples. Her blood alcohol was going down. Now, I don't know when she consumed those two beers. She may have come in with a blood alcohol to that restaurant to start because she said she had one at home. Okay. So I don't know what those—and I don't know how big that one was or whatever. If you give me information I'll nail it. But I don't know have [sic] that. So I then look at what she consumed. So she says she consumed these two Buds. Now, being that she consumed them I don't know when she had that last sip. She may have started at 11:00 o'clock but did she finish them by 12:00? Did she finish them by 1:00? Did she finish them by 1:15? It's somewhere in that period that she consumed the alcohol. We'll if I've got it, great, but I don't have it. So I live without it. So more likely than not she's in an elimination phase. Now, if she consumed the two Bud Light beers, 12 ounce. Let's just assume they're standard beers. They're 12 ounce. They would consume [sic] 4.2 percent alcohol. The two beers would produce a maximum blood alcohol in that lady at 131 pounds of .075. Now, wait a minute. Those would have been eliminated entirely by the

time the two samples were drawn because she's got so much time in there before those blood alcohols were drawn. So either she drank more alcohol or she drank her alcohol later so that her blood alcohol may have been rising. Now, if she was in extrapolation, [sic] if she was in an elimination phase, this is models. It gives us predictions as to what her blood alcohol could be. If she was normal, if she had a normal rate of elimination, this .017 per hour, she was the average person, then her blood alcohol at the time of the crash would have been a .102 gram percent.

Dr. Ferslew admitted that his estimate was based on an average metabolic rate and that the defendant's blood alcohol level at the time of the offense might have been as low as 0.073 or as high as 0.168 if this variable were changed in the extrapolation model. He said the test results also reflected that the defendant had cocaethylene in her system, which he explained was a metabolite formed by the body when cocaine and alcohol are taken at the same time. Dr. Ferslew testified that in his opinion, the defendant was under the influence of alcohol and cocaine at the time in question, which contributed to her "misoperation" of her car.

The defendant argues that the trial court erred in allowing Dr. Ferslew's testimony about his estimation of the defendant's blood alcohol level at the time of the crash based upon retrograde extrapolation. The defendant's position is that Dr. Ferslew's opinion was not reliable due to an absence of underlying facts and data to render it trustworthy. The defendant points to the fact that Dr. Ferslew had no information about one of the three prongs of the triad and the witness's use of an assumed rate of alcohol elimination, rather than one which took into account specific information about the defendant.

In addressing this argument, we first note the framework of Dr. Ferslew's testimony. The witness offered his opinion that the defendant was impaired from alcohol and cocaine use at the time of the offenses and that this impairment contributed to the occurrence of the offenses. In formulating that opinion, the witness relied upon a triad of factors. He had no information about one of those factors. Consideration of another of those factors involved applying the principles of retrograde extrapolation to known data to predict the defendant's blood alcohol level at the time of the offenses. In light of the concerns raised in the defendant's argument, our analysis involves two steps. First, we must consider whether the trial court properly allowed the witness to testify about retrograde extrapolation. If so, we must consider whether the trial court properly allowed the witness to testify about his overall conclusions, which were based in part upon his retrograde extrapolation analysis and were made despite the missing prong of the triad.

"Extrapolation involves the use of scientific evidence to relate the blood alcohol level at the time of testing back to the time of operation of the vehicle." State v. Greenwood, 115 S.W.3d 527, 531 (Tenn. Crim. App. 2003) (citing E. John Wherry, Jr., The Rush to Convict DWI Offenders: The Unintended Unconstitutional Consequences, 19 Dayton L. Rev. 429, 449 (1994)). This court has noted previously that there is division within the scientific community over the reliability of

retrograde extrapolation. Id. at 531. In Greenwood, this court relied in part on the Texas Court of Criminal Appeals' overview of the science of retrograde extrapolation in Mata v. State, 46 S.W.3d 902 (Tex. Crim. App. 2001), rev'd on other grounds following remand, 122 S.W.3d 813 (Tex. Crim. App. 2003). The Mata court synthesized from numerous sources the process of human alcohol absorption and elimination:

As alcohol is consumed, it passes from the stomach and intestines into the blood, a process referred to as absorption. When the alcohol reaches the brain and nervous system, the characteristic signs of intoxication begin to show. The length of time necessary for the alcohol to be absorbed depends on a variety of factors, including the presence and type of food in the stomach, the person's gender, the person's weight, the person's age, the person's mental state, the drinking pattern, the type of beverage consumed, the amount consumed, and the time period of alcohol consumption. At some point after drinking has ceased, the person's BAC will reach a peak. After the peak, the BAC will begin to fall as alcohol is eliminated from the person's body. The body eliminates alcohol through the liver at a slow but consistent rate.

Mata, 122 S.W.3d at 909 (footnotes omitted); see Greenwood, 115 S.W.3d at 531.

The greatest concern regarding the reliability of expert extrapolation evidence arises from the individual variations in alcohol absorption rates. Kimberly S. Keller, "Sobering Up Daubert: Recent Issues Arising in Alcohol-Related Expert Testimony," 46 S. Tex. L. Rev. 111, 123 (2004). Expert evidence involving retrograde extrapolation may be based upon assumptions made from generally accepted principles of pharmacology, toxicology, and physiology, without specific information about the individual's absorption rate, or it may be more specific, taking into account the many factors which affect individual absorption. Id. Further, the majority of experts agree that the potential for error increases significantly when an attempt is made to extrapolate blood alcohol levels back more than one hour, and consideration of individual characteristics of "many" of the specific factors is necessary for an accurate determination with a sample that is remote in time. See id. at 117-18. Despite these concerns, many courts have admitted expert proof of retrograde extrapolation. See, e.g., State v. Vliet, 119 P.3d 42 (Haw. 2001); State v. Jensen, 482 N.W.2d 238 (Minn. App. 1992); State v. Catoe, 336 S.E.2d 691 (N.C. App. 1985).

Addressing first the reliability of the underlying facts upon which Dr. Ferslew based his retrograde extrapolation calculation, we note that the witness testified that he had specific information available and that he made some assumptions about unknown factors. However, his estimation was based upon an average rate of elimination, not one which he specifically calculated for the defendant. Dr. Ferslew said that he assumed that the defendant was "normal" and used an "average" rate of seventeen milligrams per deciliter per hour, or 0.017. In his testimony, he qualified his estimation of the defendant's blood alcohol level by stating that if she were "normal," her level

would have been 0.102 at the time of the offense. He acknowledged that elimination rates were variable and that her actual blood alcohol level may have been as low as 0.073 or as high as 0.168 when the crash occurred. He likewise testified about the many variables that may cause an individual's elimination rate to vary from the norm and acknowledged specific information about the timing of the defendant's food and alcohol consumption, gender, and weight that may have affected her actual elimination rate, and ultimately, her blood alcohol level.

Upon consideration, we hold that the trial court did not abuse its discretion in admitting this evidence. The witness's opinion was based upon an assumed average elimination rate developed from scientific research, and he explained that his opinion was an estimate which could be affected by certain variables. The witness did not testify that he attempted to use the known factors to develop an elimination rate that was unique to the defendant or that his estimation was absolute. An expert's opinion testimony should be predicated upon sufficient facts in order that the opinion given is "not based on mere speculation or conjecture and . . . is not misleading to the trier of fact." See Pentecost v. Anchor Wire Corp., 662 S.W.2d 327, 329 (Tenn. 1983); State v. Jashua Shannon Sides, No. E2006-01356-CCA-R3-CD, Hamilton County (Tenn. Crim. App. Feb. 28, 2008) (stating this requirement in context of Dr. Ferslew's testimony about retrograde extrapolation estimate of defendant's blood alcohol level), app. filed (Tenn. Apr. 29, 2008). Further, the retrograde extrapolation evidence was of substantial assistance to the trier of fact in determining whether the defendant was intoxicated at the time of the offenses.¹ The jury was not misled because Dr. Ferslew explained the limitations of his estimate and acknowledged the broader range within which the defendant's blood alcohol level might actually have been.

We must now consider whether the trial court properly admitted Dr. Ferslew's ultimate opinion that the defendant was impaired from alcohol and cocaine at the time of the wreck. Dr. Ferslew admitted that he had no information about one prong of the triad of considerations, that of observations of the defendant for signs of intoxication. Dr. Ferslew testified that his opinion was based upon less than complete information. He said that observations about the defendant were not available due to the severity of the wreck, which he said was sometimes the case with more serious accidents. However, he testified that ideally, he would have this information in every case, but that he could evaluate a case without it if it were not available. Upon review, we hold that the trial court did not abuse its discretion in admitting this opinion evidence. Dr. Ferslew acknowledged the information he lacked and the fact that his opinion would be more accurate the more information was known. He based his opinion on extensive information he was provided about the other two prongs of the triad and his retrograde extrapolation computation. Dr. Ferslew's opinion testimony about the defendant's impairment provided substantial assistance to the trier of fact in interpreting the many factual components related to the question of impairment. Further, the information was not misleading. He noted the limits of his opinion given the lack of perfect information.

¹We note that the defendant has not raised a challenge to the reliability of the retrograde extrapolation analysis from samples drawn hours after the wreck. See generally Greenwood, 115 S.W.3d at 533 (noting that blood samples must be obtained a reasonable time after driving in question); Keller, 46 S. Tex. L. Rev. at 117 (noting difficulty of obtaining reliable extrapolation when sample and driving incident are more than one hour apart).

III. JURY INSTRUCTION

Over objections by defense counsel, the trial court included the following instructions in its charge to the jury:

You have heard from the evidence that there was at the time of the incident eight hundredths of one percent or more by weight of alcohol in the defendant's blood. Such evidence creates an inference that the defendant was under the influence of such intoxicant at the time of the incident and that the defendant's ability to drive was impaired. If you find from the proof that the defendant had eight hundredths of one percent, .08, or more by weight of alcohol in her blood, you the jury are permitted to infer that the defendant was under the influence of such an intoxicant and that the defendant's ability to drive was therefore impaired sufficiently to constitute a violation of law against driving under the influence of alcohol. However, you're never required to make this inference. It is the exclusive province of the jury to determine whether the facts and the circumstances shown by the evidence in this case warrant any inference which the law permits the jury to draw. Also, the inference may be rebutted by other evidence and circumstances. It is for you, the jury, to determine after a consideration of all the evidence whether to make the inference which the law permits, the correctness of such inference and the weight is to be given to such evidence.

The defendant contends that this inference instruction was erroneous because the state did not present evidence of breath or blood tests showing that the defendant's blood alcohol level was .08 percent or higher and because the defendant was not charged with "the per se criminal offense for operating a motor vehicle with an illegal blood alcohol level." She asserts that the instruction improperly shifted the burden of proof. The state counters that the instruction was appropriate because it correctly stated the law and because there was evidence that the defendant's blood alcohol level was above .08 percent.

We first note that the trial court has a duty "to give a complete charge of the law applicable to the facts of a case." State v. Harbison, 704 S.W.2d 314, 319 (Tenn. 1986); see also Tenn. R. Crim. P. 30. A charge is prejudicial error if it fails to "submit the legal issues or if it misleads the jury as to the applicable law." State v. Hodges, 944 S.W.2d 346, 352 (Tenn. 1997). A defendant has a constitutional right to a correct and complete charge of the law. State v. Forbes, 918 S.W.2d 431, 447 (Tenn. Crim. App. 1995).

The challenged portion of the trial court's instruction in the present case is modeled after Tennessee Pattern Jury Instruction, Crim., 38.05, which states in part:

You have heard from the proof that at the time of the defendant's arrest, [he] [she] consented to and was given a test for the purpose of determining the alcohol content of the defendant's blood.

Evidence from the test that there was, at the time alleged, eight-hundredths of one percent (.08%) . . . or more by weight of alcohol in the defendant's blood, creates an inference that the defendant was under the influence of such intoxicant, and that the defendant's ability to drive was impaired.

If you find from the proof that the defendant was found by means of a blood test to have eight-hundredths of one percent (.08%) or more by weight of alcohol in the defendant's blood, you, the Jury, are permitted to infer that the defendant was under the influence of such intoxicant, and that the defendant's ability to drive was therefore impaired sufficiently to constitute a violation of the law against driving under the influence of alcohol.

....

The trial court gave a modified version of these instructions based on Tennessee Code Annotated section 55-10-408, which states:

For the purpose of proving a violation of § 55-10-401(a)(1) [DUI], evidence that there was, at the time alleged, eight-hundredths of one percent (.08%) or more by weight of alcohol in the defendant's blood shall create a presumption that the defendant's ability to drive was sufficiently impaired thereby to constitute a violation of § 55-10-401(a)(1).

This provision speaks of a presumption of impairment when there is "evidence" that the defendant's blood alcohol level was .08 percent or more, rather than necessarily a test reaching that conclusion.

We conclude that the trial court's instruction was an accurate statement of the law based on section 55-10-408. The defendant's argument that the inference instruction is only appropriate when there was a test done on the defendant that showed a blood alcohol concentration of .08 percent or higher rests on the language of the pattern jury instructions and cases in which inference instructions were given when there were test results. See State v. Victor S. Kelly, Jr., C.C.A. No. 01C01-9709-CC-00429, Williamson County, slip op. at 7 (Tenn. Crim. App. Jan. 19, 1999) (holding that trial court properly instructed jury "that if it found the defendant's blood alcohol concentration was .10 or greater, it 'may' infer that the defendant was under the influence of an intoxicant and that his ability to drive was impaired."); State v. Gregory Steele, C.C.A. No. 01C01-9706-CC-00218, Franklin County, slip op. at 5-6 (Tenn. Crim. App. Apr. 7, 1998) (discussing sufficiency of evidence

and presence of inference where blood tests showed result of .10 percent), app. denied (Tenn. Jan. 25, 1999). However, as the state correctly notes, Tennessee Pattern Jury Instructions, while offering guidelines on jury instructions, do not have the force of law. Ali v. Fisher, 145 S.W.3d 557, 564 n.7 (Tenn. 2004). Furthermore, the cases cited by the defendant do not suggest that the instruction can only be given when there are blood or breath tests showing an actual blood alcohol concentration of .08 percent or more. The statute which creates the inference speaks in terms of “evidence” that a defendant’s blood alcohol content was .08 percent or more. In this case, the state presented evidence, through expert testimony, that the defendant’s blood alcohol content exceeded .08 percent at the time of the crash. It was within the jury’s province to accept or reject this evidence and, if it accepted the evidence, to infer that the defendant was impaired. The trial court’s instruction did not improperly state the law or mislead the jury as to the applicable law and, thus, was not in error.

IV. SENTENCING

Finally, the defendant has presented sentencing issues regarding the length of probation, the terms of the community service, and the length of the suspension of her driver’s license. The trial court imposed an eight-year sentence for vehicular homicide and two-year sentences for each of the vehicular assault convictions, to be served concurrently. The court found that some confinement was necessary to avoid depreciating the seriousness of the offense and ordered the defendant to serve one year in jail followed by a sixteen-year probationary term. In a written order, the court imposed detailed terms of probation:

- 1) Service of one year in the Cannon County Jail, followed by a period of probation for sixteen (16) years.
- 2) Her driver’s license will be revoked for eight (8) years.
- 3) She must submit to an alcohol and drug assessment and follow any further recommendations.
- 4) Each year, she must perform a minimum of 250 hours of community service work by mentoring a child the age of Benjamin Leavy at the time of his death. The child must come from an underprivileged home and may be designated by either the Boys and Girls Club of Middle Tennessee or the Metro/Davidson County School system. The victim’s parents will be notified monthly of the completion of this requirement. This will result in her benefitting the lives of at least sixteen (16) children and honoring the memory of Benjamin Leavy.
- 5) In addition, during this sixteen-year probation period, she must speak to a civic organization about the devastation of Driving Under the Influence not only to her but also to the victims and victim’s families. She must include a picture of Benjamin Leavy in her presentation. This Court and the victims must approve her general presentation and this will be

provided to the Court and the victim's family within thirty days of her release from jail. Additions and deletions submitted by the family will be included with Court approval. During the first four years of probation, she is ordered to make twelve (12) presentations. For the remaining increments of four years, she must conduct nine (9) presentations a year, followed by six (6), and during the last four years she must perform at least three (3).

- 6) She must write a letter of apology to the victims, the victim's families, his friends, and his school. The family may submit a list of names within thirty days to whom she shall write.
- 7) The Defendant is ordered to provide any restitution to the brother of Benjamin Leavy for the cost of mental health counseling, which has not previously been provided for under any other settlement agreement.
- 8) She must comply with all the terms of probation and may not consume any drugs or alcohol and must submit to random drug and alcohol screens.

When a defendant appeals the length or manner of service of a sentence imposed by the trial court, this court conducts a de novo review of the record with a presumption that the trial court's determinations are correct. T.C.A. § 40-35-401(d) (2003).² However, the presumption of correctness is "conditioned upon the affirmative showing in the record that the trial court considered the sentencing principles and all relevant facts and circumstances." State v. Ashby, 823 S.W.2d 166, 169 (Tenn. 1991). The burden is on the appealing party to show that the sentence is improper. T.C.A. § 40-35-401(d), Sent'g Comm'n Cmts. This means if the trial court followed the statutory sentencing procedure, made findings of fact that are adequately supported in the record, and gave due consideration and proper weight to the factors and principles relevant to sentencing under the 1989 Sentencing Act, we may not disturb the sentence even if a different result were preferred. State v. Fletcher, 805 S.W.2d 785, 789 (Tenn. Crim. App. 1991).

In conducting a de novo review, we must consider (1) the evidence, if any, received at the trial and sentencing hearing, (2) the presentence report, (3) the principles of sentencing and arguments as to sentencing alternatives, (4) the nature and characteristics of the criminal conduct, (5) any mitigating or statutory enhancement factors, (6) any statement that the defendant made on his own behalf, and (7) the potential for rehabilitation or treatment. T.C.A. §§ 40-35-102, -103, -210; see Ashby, 823 S.W.2d at 168.

²We note that on June 7, 2005, the General Assembly amended Tennessee Code Annotated sections 40-35-102(6), -114, -210, -401. See 2005 Tenn. Pub. Acts ch. 353, §§ 1, 5, 6, 8. However, the amended code sections are inapplicable to the defendant's appeal. The defendant was sentenced after the change in the sentencing laws took effect, but the record does not reflect that the defendant signed a waiver of her ex post facto protections to be sentenced under the amended provisions. See T.C.A. § 40-35-210, Compiler's Notes.

At the defendant's sentencing hearing, the presentence report was introduced and reflected that the forty-four-year-old defendant did not have a history of criminal convictions but did admit to the past use of alcohol, marijuana, cocaine, and "speed." She said she had not used illegal drugs since the offenses. The defendant was employed by Ford Motor Credit at the time of sentencing.

Laura Leavy, Ben and Shaun's mother, Richard Leavy, Susan Koenig, and Shaun Leavy testified at the sentencing hearing. They read parts of their victim impact statements and testified regarding the profound effect Ben's death had on their lives. Shaun Leavy testified that he suffered from anxiety and fears of dying since the offenses. Each victim witness asked the court to order the harshest possible punishment for the defendant.

Friends and family members of the defendant testified on her behalf. They testified that the defendant was a loving and caring person. The defendant's niece, Candace Yott, and the defendant's good friend, Morita King, testified that they did not know that the defendant had a history of abusing alcohol and drugs and that they would have offered her help and support if they had been aware. The defendant's family members and friends testified that they had given the defendant rides to work, AA meetings, community service programs, and the hospital to take drug tests since her driver's license had been revoked. They explained that the defendant, along with other family members, helped take care of her ill father until his death in 2005. The defendant's husband testified that he relied on the defendant's job to receive health insurance. He said the defendant attempted to receive in-patient services for her drug and alcohol abuse recovery but that she was denied in-patient treatment because she was not currently using drugs or alcohol. He said the defendant had a strong support system, as indicated by letters of support sent to the court and the number of family members and friends who were present at the sentencing hearing.

The defendant made an allocution in which she expressed guilt and remorse over the death of Ben Leavy and the losses suffered by the Leavy family. She said she did not use alcohol or drugs anymore and had been regularly attending AA meetings. She said she wanted to educate people on the harmful effects of drinking and driving. She said she would have given her life to save Ben's if she could.

Considering first the length of the defendant's probation, the defendant argues that the trial court related this to nothing other than "the reference that sixteen children will benefit from the death of Benjamin Leavy." The record reflects that the trial court related the sixteen-year term to the need to ensure that the defendant complied with the professions of rehabilitating herself that she made in her allocution. Further, the court made the following findings relative to sentencing:

[T]his Court is unable to conclude total confinement is appropriate in this case. This Court is confined by the principles of sentencing and finds ordering this Defendant to serve her entire sentence in prison would not be the most effective method of punishment for this Defendant. This Court finds the Defendant to have the potential for rehabilitation and more importantly the potential to make a successful

impact on the dangers our community faces from this offense by being subject to stringent alternative sentencing requirements.

(Emphasis added.).

We see nothing in the record to support a finding that sixteen years of probation was “the least severe measure necessary to achieve the purposes for which the sentence is imposed[.]” T.C.A. § 40-35-103(4). The record reflects that the defendant had discontinued the use of alcohol and drugs, regularly attended AA meetings, had a strong support system, had talked with others about drinking and driving, and had expressed her desire to continue to be a positive influence in keeping intoxicated drivers off the road. The defendant has no prior criminal record and was gainfully employed. The trial court ordered a year of confinement in addition to the maximum probationary term. Upon review, we hold that the probation component of the defendant’s sentence should have been set at eight years. We modify the service of the defendant’s eight-year sentence to one year of confinement followed by eight years of probation. Such time with the stringent conditions set by the trial court should be sufficient to meet the trial court’s concerns.

As for the terms of probation, the defendant contends that 250 hours of community service per year is overly burdensome and unduly restrictive of her liberty, although she makes no suggestion of the number of hours per year which she believes is reasonable. She also argues that the trial court exceeded its statutory authority by designating the specific agencies with which the defendant must perform her community service and that as a convicted felon, she will not be permitted by any agency to work with children under its care.

Regarding the hours per year required, although the trial court’s written sentencing order mandates that the defendant perform 250 hours of community service, the sentencing hearing transcript reflects that the trial court ordered 200 hours of community service per year. When a discrepancy exists between a transcript of court proceedings and a judgment or written order in the record, the transcript controls. *See, e.g., State v. Moore*, 814 S.W.2d 381, 383 (Tenn. Crim. App. 1991) (stating that when there is a conflict between the court minutes and the transcript of the proceedings, the transcript controls); *State v. Miranda Sexton*, No. E2006-01471-CCA-R3-CD, Hamblen County, slip op. at 8 (Tenn. Crim. App. Feb. 27, 2007) (noting that when there is a discrepancy between the sentencing hearing transcript and the judgment form, the transcript controls). Thus, we consider the propriety of 200 hours per year in our review.

The Sentencing Act provides that as a component of a sentence involving probation, the defendant may be ordered to “[p]erform, without compensation, services in the community for charitable or governmental agencies.” T.C.A. § 40-35-303(d)(3). As with the length of the probationary term, the court tied the terms of probation to the need to ensure the defendant’s successful rehabilitation, and it imposed precise terms tailored to ensure the defendant met that goal.

The record reflects that the court attempted to impose conditions that were appropriate for the circumstances, which included terms which, although substantial, were crafted to the offense and

to the defendant. While trial courts are not explicitly authorized to designate specific agencies through which community service is to be performed, they are afforded great latitude in setting the conditions of probation, including the conditions of community service, as long as they are within the bounds of “traditional notions of rehabilitation,” State v. Burdin, 924 S.W.2d 82, 85 (Tenn. 1996), and are “reasonable and realistic and . . . not . . . so stringent as to be harsh, oppressive or palpably unjust,” Stiller v. State, 516 S.W.2d 617, 620 (Tenn. 1974). Upon review, we hold that 200 hours of community service per year with the corresponding terms and conditions is appropriate to ensure the defendant’s rehabilitation. Cf. T.C.A. § 55-10-403(n) (permitting judges in counties with metropolitan form of government and population over 100,000 to impose 200 hours of public service work on first-time DUI offenders in lieu of mandatory minimum 48-hour incarceration period). We note, as well, that the number of years the defendant is required to perform community service has been halved by our reduction of the length of the defendant’s probation. Should the terms relative to mentoring children prove impossible for the defendant to complete due to her status as a felon or other terms become genuinely unworkable, the trial court may modify those terms pursuant to Tennessee Code Annotated section 40-35-212(c) (2003).

Last, we consider the defendant’s challenge to the loss of her driving privileges for eight years. The defendant argues, without any explanation of the specifics of her situation, that the minimum revocation of three years is appropriate.

The vehicular homicide statute requires the trial court to “prohibit a defendant convicted of vehicular homicide from driving a vehicle in this state for a period of time not less than three (3) years nor more than ten (10) years.” T.C.A. § 39-13-213(c). In addition, the portion of the motor vehicle statutes dealing with driver’s licenses provides that the Department of Safety shall revoke the license of a person convicted of vehicular homicide for the “term of the sentence received by the convicted person,” with provision for early reissuance upon recommendation of the probation or parole officer, satisfactory completion of the licensing examination, and approval of the commissioner. T.C.A. § 55-50-501(a)(1). The former action of the trial court is a suspension of driving privileges, whereas the latter action of the Department of Safety is a revocation of the driver’s license. See State v. Kevin Lee Pennell, No. M2001-01863-CCA-R3-CD, Davidson County (Tenn. Crim. App. Apr. 28, 2003) (contrasting judicial license suspension and administrative license revocation), app. denied (Tenn. Oct. 13, 2003).

In the present case, although the trial court elucidated its reasons for crafting the alternative sentence as it did, it did not explain the rationale behind prohibiting the defendant from driving for eight years. Rather, the court merely stated as one of the conditions of the defendant’s probation that her “driver’s license will be revoked for eight years.”

In conducting our review, we note the defendant’s use of alcohol and cocaine before the offenses. The results of the defendant’s actions were indeed disastrous, resulting in the loss of life to a child and severe injuries to three others. The defendant also admitted prior drug use. However, the record reflects that the defendant has no prior criminal convictions, including driving-related convictions, that the defendant had been attending AA meetings and had stopped using drugs, that

the defendant was gainfully employed, and that she had a large support system of family and friends. We note as well that the trial court imposed a substantial regimen of community service as a condition of her probation. Given the automatic administrative revocation of the defendant's license for eight years, we hold that the trial court did not err in mirroring this time period in its own suspension, albeit incorrectly termed a revocation, of the defendant's driving privileges. If the defendant shows satisfactory progress after her release from jail, her probation officer may recommend early reinstatement of her driver's license through the Department of Safety, and the trial court will have the power to remove the suspension of her driving privileges as a term of her sentence pursuant to Tennessee Code Annotated section 40-35-212(c).

CONCLUSION

Based on the foregoing and the record as a whole, we affirm the defendant's convictions for vehicular homicide and three counts of vehicular assault. We modify her sentence for vehicular homicide to eight years, to be served as follows: one year in jail followed by eight years of probation. In all other respects, the sentences imposed by the trial court are affirmed.

JOSEPH M. TIPTON, PRESIDING JUDGE