



**RONALD R. SCOTT, M.A., M.S.**  
Forensic Firearms & Ballistics  
37881 N. 10<sup>th</sup> Street  
Phoenix, Arizona 85086

**623.764.6371**

[www.azballistics.com](http://www.azballistics.com)  
[www.forensic-ballistics.com](http://www.forensic-ballistics.com)  
[ronaldscott@azballistics.com](mailto:ronaldscott@azballistics.com)

---

***Firearms ▪ Ballistics ▪ Police Shootings ▪ Shooting Reconstruction & Investigations  
Toolmarks & Comparison Microscopy ▪ Dynamics of Shooting Incidents ▪ Crime Scenes ▪ Gunshot  
Distance ▪ Daubert Consultation ▪ Gunshot Wounds ▪ Hunting & Firearms Safety ▪ Trajectory Analysis***

January 15, 2016

Attorney Jeffrey I. Ehrlich  
16130 Ventura Blvd.  
Suite 610  
Encino CA 91436

Re: Raymond Jennings

Dear Sir:

**1. Purpose**

The purpose of my involvement in this case is to review source materials which have been provided to me regarding issues involving evidence and testimony which contributed to the conviction of Mr. Raymond Jennings.

The scope of my investigation is related to firearms, ballistics, shooting reconstruction, shooting incident dynamics, crime scene analysis, and any related factors.

**2. Credibility of Facts and/or Witnesses.**

It is to be understood that the credibility of facts or witnesses alleged as true in any case is determined by the finder of fact.

**3. Qualifications.**

I am a 25-year plus retired Commissioned Officer of the Massachusetts State Police with over half my career in the MSP Ballistics Section and was the Commanding Officer of the main and sub-labs with 7 forensic examiners; I conducted, supervised, and trained personnel in forensic investigations, shooting reconstruction, and the dynamics involved in shooting incidences. I have also conducted criminal investigations related to shooting incidences and other crimes. The lab provided crime

scene investigation and forensic examination services to 350 cities and towns, all State agencies, all Federal agencies except the FBI, and the military services in Massachusetts.

I was appointed a member of the MSP Firearms Review Board which evaluated departmental officer involved shooting incidences. As a member of the Staff Inspections Unit, I conducted agency shooting investigations, claims of excessive force and/or police misconduct, and violations of Policy & Procedure and Rules & Regulations.

I have investigated approximately 400 police involved shootings including incidents of friendly fire, involuntary accidental discharge, and inappropriate use of firearms.

I have personally conducted thousands of forensic investigations, including crime scenes, attended post-mortems, trained with prominent forensic pathologists in gunshot wounds, attended the Bureau of Alcohol, Tobacco, Firearms National Firearms Investigation course, FBI courses, state law enforcement courses, medico-legal death seminars, thousands of hours of in-service training at the State Police Academy, numerous crime scene shooting reconstruction courses, forensic seminars, etc.

As an expert witness I have testified approximately 280 times in the areas of firearms, ballistics, shooting reconstruction, crime scene analysis, and shooting dynamics at all levels of the court system including Federal Court and Military Hearings. Testimony has been given before the Massachusetts Legislature and consultation provided to Massachusetts Congressmen to assist with legislative issues.

U.S. Army active duty career was within the Ordnance Corps and included extensive training and assignment in the testing, evaluation, repair and research of small arms and training in Explosive Ordnance Reconnaissance. I attended the U.S. Army Ordnance School at Ft. Dix and Small Arms Repair School, at Aberdeen Proving Ground, MD.

I have trained with the MSP Special Tactical Operations (STOP) team and with the 10<sup>th</sup> Special Forces Group at Fort Devens, MA for purposes of familiarization with special weapons and tactics.

For over 20 years I competed at the professional level in several shooting sports including Precision Pistol Competition (PPC) for police officers, shotgun trap and skeet, long range rifle, and metallic silhouette; I conducted extensive research and development by custom loading of various projectile designs, weights, and propellants. I have won numerous competitions and awards and was the 1980 World Champion of the IHMSA Competition held at Camp Curtis Guild in Wakefield, MA.

In 2002 I became an independent forensic consultant and provide services including firearms, ballistics, shooting reconstruction, ballistic testing, gyroscopic stability; internal, external, and terminal ballistics; reaction time, analysis of time and motion in a shooting incident, trajectory and drag model analysis and other specialized services. I have been retained by the U.S. Military, engineers, insurance companies, attorneys, prosecutors, authors, architects, Innocence Projects, and conducted work for both sides in legal issues. Since 2002 I have been involved in over 500 investigations requiring shooting reconstruction and/or forensic investigation in approximately 45 of the U.S. states, and in Haiti, Virgin Islands, United Kingdom, Israel, Afghanistan, Iraq, Canada, Nigeria, the Philippines, and Pakistan.

My forensic training, education, and experience are over 35 years, and my overall experience with firearms, ballistics, etc., exceeds 53 years.

I am a member or former member of several professional organizations.

**4. Source Materials.**

- A. Letter (34 pages) dated October 2, 2015 from Attorney Jeffrey Ehrlich to Mr. Ken Lynch at the Conviction Review Unit of the Los Angeles County District Attorney's Office.
- B. Transcript of the testimony of Prosecution Firearms Instructor Deputy Sheriff Michael Winter, Los Angeles County Sheriff's Department at trial, date unknown.
- C. Transcript of Prosecution Closing Statement.
- D. Crime Lab Report on Examination of Security Guard Uniform.
- E. Transcript of Firearms Examiner James Carroll.
- F. Transcript of Medical Examiner, Dr. Scholz.

**5. Brief Summary.**

Raymond Jennings was convicted in the third trial after jurors in trials held in 2008 and 2009 could not reach a verdict.

The victim, Michelle O'Keefe, was shot in the darkened area of a parking lot which Raymond Jennings had been assigned to as a security guard.

She was shot at close range in the chest and several times in the head which were determined to be within two to three feet.

**6. Testimony of Deputy Sheriff Michael Winter.**

Deputy Winter testified that he was primarily a firearms instructor; that he repaired and researched weapons for the Sheriff's Department, and that he taught tactics. It does not appear that this training is for forensic shooting reconstruction, firearms identification, ballistics (internal, external, terminal), or shooting dynamics as it relates to the elements of time and motion in a shooting incident. The testimony of Deputy Winter was apparently conducted in an attempt to connect Mr. Jennings experience in the National Guard with the prosecution theory that the defendant possessed an exceptional degree of skill and proficiency which would have been required by the shooter in this incident.

In reality, the issues which were presented to the jury were just the opposite and some of the testimony was purely inaccurate and misrepresented the known generally accepted training methodology and scientific principles.

The following areas are addressed:

- Raymond Jennings's purported National Guard training which allegedly provided a high degree of tactical training.
- That Jennings's National Guard signified that he possessed exceptional marksmanship skills with a 9mm pistol that was loaded with mixed types of ammunition.

- That the type of hollow point ammunition used in the shooting, Federal Hydra-Shok, is designed with a post in the center of the hollow nose so that the projectile will maintain a straighter wound path in the body.
- Purported National Guard training that would have provided Jennings's with significant skill and proficiency that would enable him to load a pistol so that the type of ammunition (full metal jacket and hollow nose projectiles) was stacked in a specific manner that would provide a greater degree of fatal wounding.
- That it is common training methodology for both the police and military to aim at the head and shoot to stop the threat if the shots to the main upper torso (center mass) are not successful.

Since there are several overlapping issues for each area it will be more efficient and effective to address these matters in the aggregate.

Testimony suggesting that the military conducts the same type of training as that of the Los Angeles Sheriff's Department is clearly not accurate since police are using P.O.S.T. training modules and the military has completely different mission objectives.

Police officers carry handguns as their primary weapon, the military carries hip or shoulder fired weapons as the standard issue. The average trained police officer does not perform police duties carrying a long arm; that is usually reserved for special tactical teams such as SWAT.

On the issue loading different types of ammunition so that the shooter could fire the first shots that had the most wounding effect, this contradicts the overwhelming recommended procedure of using the same make, design, weight of bullet, velocity and kinetic energy. This is directly related to the areas known as internal, external, and terminal ballistics and forms the foundation of producing replicated accuracy for each and every shot fired.

Mixing different ammunition risks jams occurring in the pistol and since the bullet weight, velocity, shape, and propellant are different it causes problems in accuracy. The generally accepted practice for all experienced shooters, police departments, and the military is to qualify with the same ammunition that you intend to carry. This provides for consistent firearms operation and consistent accuracy with each shot.

It is also important to note that hollow point ammunition is designed to expand and lose its velocity and energy in the body soft tissue so that there is less chance of an exit wound which could permit a projectile to strike a second person.

The post in the center of the hollow cavity of the projectile's nose has absolutely no relationship to the bullet going straight. The post is designed and stated by Federal Cartridge Co as being for the purpose of forcing soft tissue outwards toward the serrated edges of bullet's copper jacket which will then result in more uniform expansion.

The wounding effect of ammunition is not based on the fact that hollow point has expanded, it is based on the velocity and kinetic energy produced by any projectile; a full metal jacket projectile

with greater velocity and energy will produce a larger temporary wound cavity than a heavier projectile with less velocity and energy, and it is this large cavity which pulverizes and shreds tissue and vital organs.

An experienced shooter would never mix ammunition from different manufacturers. When shooting crimes are committed and evidence is recovered which shows that different makes and types of ammunition came from a single firearm, it is a clear and convincing sign that the person simply loaded whatever they could get their hands on.

Persons who cannot legally purchase ammunition and use the same brand and design with the same consistent velocity and energy will acquire whatever they can from other sources. Typically these are persons affiliated with street gangs where resources involving firearms can be shared.

There is no secondary target selection process involving “head shots” for the police, military, or civilian areas as an alternative to standard center mass targeting in general firearms training.

The reason this is not an accepted practice is because the legs, arms, hands, and head are too small and capable of rapid motion while center body mass is the least mobile.

Of interest is the fact that Jennings actually responded to the type of training that would be received regarding cover and concealment. Instead of standing up in the open to be seen and possibly become a target, he reacted like a police officer or soldier is trained – take cover and conceal yourself until the situation is assessed.

## **7. Shooting Reconstruction Issues and Gunshot Wounds.**

The crux of the prosecution’s case in the testimony of Deputy Winter is suggesting that there was some extraordinary proficiency involved by the shooter due to the movement of the vehicle, the door being open, the window down four and one half inches, and the type of ammunition being used.

However, based upon evidence that the victim’s wounds were the result of the firearm being approximately 2 to 3 feet away, this negates any such super skill and proficiency since there is no evidence that gunshot residue was tested for on the exterior side of the driver door window, nor the interior side to determine the density of the pattern to even conclude that these gunshots were even fired in a manner that the projectile passed through the four and one half inch open window space.

If they had then the firearm would have had to be within the 2 to 3 foot distance and if the shooter was firing while standing in front of the open driver door then there would have been little to no skill involved since there would have been a distance of approximately 2 to 3 feet from the door to the victim’s head. If the shooter had been further back then the evidence on the skin would not have been present.

My perception of the testimony of Deputy Winter on the proficiency issue and what the prosecution was presenting to the jury was that the gunshots to the head were accomplished at a distance that would have required superior skill and proficiency in shooting accuracy, but there is a major opposing scientific element that cannot be overlooked. It is not possible to have distance in a gunshot while simultaneously having evidence that they were at 2 to 3 feet. This is completely contradictory from both a logical and scientific perspective.

As a sub-topic of this, the uniform of Mr. Jennings was tested for gunshot residue and the results were negative. Apparently the prosecution wanted the jury to believe the uniform had been washed despite the crime lab indicating that they had knowledge that it did not appear to be. This should have been challenged by defense counsel instead of leaving the jury with the inference that there had been an intentional attempt by Jennings to remove evidence when in fact it apparently was never there to begin with.

**8. Dr. Stephen Scholz, Medical Examiner (Pathologist).**

Chest wound (Wound D):

Dr. Scholz testified that the sequence of shots into the victim likely started with the gunshot to the chest which had the appearance of a close gunshot due to the searing/charring of the wound area from the flame of the firearm.

The distance from the firearm would be “no more than a couple of inches”.

This was also the first shot because it diminished blood pressure which indicated to him that the other gunshot wounds came after the contact gunshot.

Left side of mouth (Wound B):

Heavy concentration of stippling within a inch and a half of the entry wound.

Other stippling was beyond that well up onto and above the eyebrow.

Concludes the firearm was within about two and half feet when fired.

Left side of neck (Wound C):

*Note: I am unable to accurately discern testimony as to presence of stippling for purposes of distance.*

Corner of left eye (Wound A):

*Note: I am unable to accurately discern testimony as to presence of stippling for purposes of distance.*

In the aggregate, depending on the overall elapsed time of the gunshots and the speed at which the victim’s vehicle was rolling backwards (it was found in neutral gear), it appears that all the shots occurred with the driver door open and the shooter located with the open driver door to his rear.

In the alternative, if the shooter was on the exterior side of the door with a four inch window opening it appears that the firearm would be protruding through the window opening or it could be

fired in the V-shaped open space between the windshield A-pillar and the driver door A-pillar, however, this would have to be evaluated in conjunction with the wound paths in the victim to ascertain whether the horizontal angle is possible.

Remaining within the area of the open door is most consistent with the stippling (tattooing) on the victim's facial area and would be within the two and one half foot distance that Dr. Scholz opines would deposit the pattern which he observed and documented.

*Note: Firearms examiner James Carroll testifies separately that stippling would normally be found at a distance of less than two feet.*

Since Dr. Scholz is opining that the two and one half foot distance is his estimate of the maximum distance, the possibility exists that it could be less which would increase the improbability that the shooter was on the opposite (exterior) side of the door.

The logic of the shooter being other than within the area next to the driver seat with the driver door open and located behind him is addressed in a separate section of this report.

## **9. Firearms Examiner James Carroll.**

Through the transcript of this witness it is learned that the ammunition recovered at the scene was not only of different bullet design but there were different manufacturers involved.

Of interest is that two /2/ of discharged cartridge cases were Federal Cartridge Company consisting of brass with a nickel plating while the remaining three /3/ were of CCI (Cascade Cartridge Industries) cartridges from their "Blazer" line of ammunition which utilizes aluminum cartridge cases.

The Blazer line of ammunition is an economy grade cartridge since the substitution of aluminum reduces the cost where brass is more expensive.

Mr. Carroll testifies to the process of hot gases that exit the muzzle will expand outward very rapidly and to how hollow point ammunition is designed to expand due to its passage through soft tissue.

As part of the prosecution theory concerning the specific design of bullet and how it was loaded into a firearm, Mr. Carroll opines that it would be depend upon the purpose they were being used for and claims that if a shooter was to fire at a person through some type of barrier that it would be prudent to have the full metal jacket projectiles being fired first if you have that type of ammunition and that hollow points would not be the first choice.

*Note: What is critical to consider here is that hollow points are designed to expand in soft tissue, they normally do not expand when perforating substrates such as sheet metal, wood, plaster, etc. They will flatten slightly as the nose of the bullet gets pinched inward, not outward.*

*The fact is that hollow points will usually not expand striking objects other than soft tissue because the hollow cavity fills with the substrate and prevents expansion. In effect, it fills the hollow cavity and actually causes the nose of the bullet to become*

*indented inward – just the opposite of the mushrooming effect because the serrated copper petals do not peel backward.*

*The importance of this is that Mr. Carroll is claiming that hollow points would be fired first if no barrier was involved and full metal jackets would be fired first if a barrier was involved when the scientific proof of the matter is that the design of the bullet is insignificant and the kinetic energy is the most important.*

*This issue goes to the claim that the order in which the ammunition was loaded was related to the skill and training of the shooter, which it is not. There was no testimony about kinetic energy that supports this theory.*

**10. Jennings Allegedly Fired A Gunshot Into The Ground Near His Feet For The First Shot But There Is Total Absence Of Forensic Evidence Known As Pseudo-Stippling.**

According to the evidence and statements made by the prosecutor to the jury, the first shot was fired by Mr. Jennings downward to the ground directly where his feet were located.

The second shot was fired at contact or near contact to the victim's chest.

For the second shot to have been fired at the distance of contact or near contact then the shooter would have to be located so that the open driver door was to the shooter's rear or to the left rear since he/she would have had full access to the victim and since the prosecution claims that the other shots were fired through the window opening as the vehicle was moving backward.

This presents two distinct problems:

- A. Since the door was open the shooter would have to step aside out of the way as the door moves backward along with the motion of the vehicle. The shooter then would have to make a return side step in order to be back in alignment with the window opening to complete the sequence of shots.
- B. Of greatest evidentiary value is the fact that the shooter's first shot into the ground would be extremely limited to a very restricted area since he is standing next to the driver seat with the open driver door behind him. The first gunshot is fired which strikes the ground at the shooter's feet and the second shot is then the contact shot to the victim's chest area.

The dominant forensic issue which I will address is the gunshot which strikes the ground at the shooter's feet.

In the prosecutor's closing statement to the jury, he focused on the location of the gunshot strike mark stating that this was where the assailant fired the first shot into the ground directly at his feet.

He stated that the gunshot strike mark to the asphalt happened when the shooter was in the open driver door area and that the muzzle flash would have been so bright that "it's like a camera flash going off down there. It would illuminate the entire base of the lot".



*Note: The muzzle flash from a 9mm is a dull orange red glow. It would not provide any significant illumination. The 9mm cartridge does not allow for much volume of propellant and the majority of it has already burned prior to leaving the muzzle.*

*The pistol used in this shooting was not found; there is no ability to exclude it as having with a muzzle brake or a flash suppressor which merely redirects the hot gases and flash through ported openings at the muzzle.*

*The propellant was not examined to see if it was low flash type which is made specifically for a reduced muzzle flash.*

*The prosecutor's claim is factually and scientifically unsound. This should not have been presented to the jury*

*There is abundant published and video data available refuting the prosecutor's statement.*

#### Uniform Clothing of Raymond Jennings:

The uniform clothing of Raymond Jennings was seized as evidence and examined in the Los Angeles County Sheriff's Department Crime Laboratory (see laboratory examination notes, pages 109-115, dated 4-19-06).

These notes indicate that the clothing was examined in detail using ambient light, magnifying light and high intensity light in conjunction with instrumentation including both macroscopic and stereoscopic methods.

The clothing had the pants cuffs opened and examined, the pockets turned inside out, and the pants legs examined to a length of 12" above the cuffs without finding or documentation of perforations, foreign material related to asphalt, copper jacket, or lead core fragments. The pants are noted as being "worn and dirty".

The examination did not find any embedded asphalt (trace evidence), or the presence of small to medium fabric damage which should also have caused punctuate wounds to Mr. Jennings.

The source of this trace evidence and/or damage and punctated wounds (marked with points or dots; having minute spots or depressions) is the fragmentation of the asphalt surface when struck by a high velocity projectile, specifically like that from a gunshot.

In addition, the projectile itself can fragment with pieces of the copper jacket, the lead core, or both bonded together, and result in significant lacerations, abrasions, or punctate wounds.

#### 9mm Luger Ammunition:

There are many major manufacturers of this ammunition both in the U.S. and foreign. It is by far the most common and extensively utilized caliber in semi-automatic pistols in the world. It is not only available in different bullet shapes and weights, but there is also a wide velocity scale.

Commercially available 9mm ammunition velocity can range between 1000 feet per second (fps) to 1650 fps.

A gunshot fired downward into asphalt will create a concentric crater. The projectile strikes the surface from a very short distance at its maximum velocity and kinetic energy. The asphalt surface and any bullet fragments disintegrates into innumerable missiles of varying size which explode outward in a cone shaped pattern at close to the same velocity as the bullet strikes.

It is these asphalt, metallic copper and lead particulates which expand away from crater like water when a rock has been dropped into it. The closer the person is, the greater the energy of the fragments with the resulting appearance of damage (perforations or embedding into clothing) and the development of punctate wounds in what is known as pseudo-stippling.

It is absolutely critical to interpret pseudo-stippling correctly so that it is not mistakenly assumed to be actual gunshot propellant stippling. This is because gunshot propellant stippling is the basis for determining the distance at which a firearm was from the target material when it was fired.

Pseudo-stippling occurs with other materials such as glass, wood, and materials which can fragment as the bullet passes through and carry foreign materials along with fragments of the bullet into the victim essentially at the same velocity as the bullet strikes the surface.

The fragments/particulates which cause wounding such as pseudo-stippling are called “secondary missiles” in forensic science.

#### Summary Conclusion of Gunshot Fired Into Ground:

One of the foremost evidentiary issues in this case is the complete and total absence of any evidence of high velocity foreign matter in the form of asphalt, copper jacket fragments, or lead core fragments being found during the detailed trace evidence examination of the uniform pants. There were no perforations reported and Mr. Jennings did not exhibit any signs of injury.

This is scientific evidence which refutes the prosecutor’s statement that Mr. Jennings fired a gunshot into the ground while at the driver door of the victim’s vehicle.

In the science of shooting reconstruction there is a phrase “The absence of evidence is as important as the abundance of evidence”.

If Raymond Jennings fired a 9mm bullet downward into the surface of the parking lot, then his clothing and footwear and likely some injuries should have displayed evidence of that action. There were none.

#### **11. Firing A Gunshot Into The Ground Is Indicative Of An Inexperienced and Untrained Person.**

“Trigger discipline” is a firearms safety training factor which teaches that your finger must remain off the trigger until you actually make the decision to shoot. This is taught in all firearms safety classes.

It is taught to police and military personnel and by the NRA and other shooting sports organizations.

This is taught to the extent that it is beyond a conscious effort. Qualified and experienced shooters practice this until it becomes natural reflex regardless of whatever firearm is picked up and is committed to muscle memory.

The person who fired the shot into the parking lot surface had to have his finger on the trigger and had to pull the trigger while it was pointed down at his own feet which is an egregious violation of trigger discipline training and firearms safety.

The person who fired the shot into the ground at the parking lot was lacking the most basic safety acumen; it is the act of an untrained, inexperienced, and unpracticed novice.

## **12. Projectile Found in Parking Lot.**

This item of evidence is fundamental in conjunction with the impact on the park lot surface.

Projectiles exhibit specific characteristics when striking a surface like a parking lot and these can be used to determine Angle of Incidence and Angle of Departure.

Very often fragments of the projectile itself, including that of the copper jacket and/or lead core will become embedded in objects (clothing, shoes, etc) that are in close proximity. In some instances they will perforate these items and cause actual wounding with the fragments becoming embedded into the skin and tissue.

This would also have been exculpatory evidence related to the absence of pseudo-stippling or damage to the uniform, footwear, and leg of Mr. Jennings.

It would have been imperative for defense counsel to raise this through cross-examination or to present it as part of the defense case.

## **13. Mixed Ammunition in Pistol that Fired Shots.**

The mixing of ammunition, whether it be by brand, bullet characteristics, shape, and design; or anything other than the exact same brand, bullet weight, shape, characteristics, design, and even from the same box of ammunition is a strong sign of a person who lacks the most basic knowledge in firearms operations.

One of the most common reasons for firearms malfunctions and poor accuracy is the failure to use ammunition which has been manufactured on or about the same day due to the possibility of changes in the propellant, type of primer, and non-uniform crimping of the cartridge case onto the projectile.

The mixing of ammunition results in a significant decrease in accuracy since the aerodynamics are not consistent from shot to shot. There are issues with consistent velocity, different propellants in each cartridge that have various burning rates, the propellant itself can be different in shape and coated with chemicals to retard or increase burning, and bullet weight is important.

Informed and trained shooters like police officers and the military do not use one type of ammunition to qualify (like Winter testified) and then get issued a different type of ammunition to carry on duty. That policy and procedure was dropped decades ago when it became an issue in civil litigation.

Police departments like the Los Angeles Sheriff's Department who may not have moved into the mainstream of police training place themselves at risk in civil matters where it can be shown that the failure to train and qualify with the same ammunition is the basis for negligence.

In a civil case which I was involved in several years ago it is my recollection that officers train and qualify with the same ammunition and that all firearms are the same and issued by the department.

It is my professional opinion that anyone mixing ammunition in a firearm is untrained and ignorant of the many problems with malfunctions and accuracy that can be expected. Every trained shooter will state that it is important to shoot the same ammunition you intend to carry so that you are aware of its interaction in the firearm that you use.

I am in complete and total disagreement with Deputy Winter's testimony that there is any tactical advantage as he claims and there are no known peer reviewed publications which support his view.

#### **14. Gunshot Acoustics.**

During the course of an investigation it is common for investigators to canvass the area for eye and ear witnesses when it involves gunshots.

While Mr. Jennings may have some knowledge of firearms, the fact that part of his assumption that there was only one shooter based upon what he heard is of no surprise despite what the prosecution would suggest as being indicative only of a person with some intricate knowledge of the incident.

Over the past 10 years I have been involved in approximately 500 shooting cases of which multiple dozens or more involved reading police reports that questioned ear witnesses on how many shots they heard fired and whether it sounded like the same gun or more than one gun.

It is not difficult to conclude that a shooting incident likely involves one firearm because there is a maximum speed at which the trigger can be pulled and this averages approximately 4 to 5 shots per second for the average trained police officer and 2 to 3 shots per second for a relative novice or with little experience.

When multiple guns are involved there are overlapping shots with some occurring simultaneously.

From an acoustic perspective, it is logical and reasonable to be able to make an informed decision that a series of gunshots appear to be coming from the same gun especially when the firearm is pointed in the same direction and all the shots are of the same caliber.

The most common error made by ear witnesses is how many shots were fired, not how many guns were being fired.

**15. Victim Could Have Been Shot by Other Than Through Window Opening.**

In determining the shooter's location and proficiency there are more key elements that were missed since the shots would not have had to be fired only through the opening of the window.

When the front doors of a vehicle are open there is a significant V-shaped gap formed by the A-Pillar of the windshield and the A-Pillar of the door (if present). If the door does not have an A-Pillar then it would be the furthest edge of the window glass itself that abuts the windshield pillar.

This opening, referred to as the door jamb, is one of the most used areas when officers are utilizing cover and concealment behind the open door of a vehicle.

This area cannot be excluded and is the more likely area in which gunshots were fired that struck the victim.

The elements of time and motion (shooting dynamics) in a shooting incident must be carefully evaluated to ensure that all possibilities are presented; it appears that the prosecution focused only on the window opening and the defense counsel failed to challenge that theory by presenting the potential that gunshots could have passed between the open door and windshield.

The exterior and interior A Pillar of the windshield and the A-Pillar or window area closest to the hinges should have been examined for gunshot residue (GSR). The failure to take samples from this area is a forensic failure in the investigation and a knowledgeable, competent, and trained investigator would have known, or should have known, that this was an important area that could reveal important evidence.

**16. Wound Paths in a Victim.**

Wound paths through the victim are dependent on the orientation of the body to the muzzle for each gunshot. The fact that gunshot wounds might be left to right, or front to back does not mean that the shooter was in some specific location. This is an extremely critical element that is often overlooked by uninformed investigators.

The fact that a person may have received a wound which is inconsistent with the location of a shooter must be analyzed to determine whether the variable of the victim's movement or body orientation has created a false assumption that the shooter could not have been where it is believed he was.

In order to accomplish this it would be important to review other information and data from the crime scene such as the location of discharged cartridge cases and the direction in which the victim's vehicle was moving as well as distances and measurements.

There is insufficient data available at this time for me to analyze this.

**17. Discharged Cartridge Cases.**

There apparently were numerous discharged cartridge cases located in the parking lot and with gunshots being rapidly fired there is little ability for a shooter to move more than a few feet in any direction during such a rapid series of gunshots.

The projectiles and discharged cartridge cases could have been examined to determine a suspected make and model of firearm, but even without this information the information that a van blocked the view of Mr. Jennings being able to see the shooter, it should have been scientifically possible to conclude the general location of the shooter to within a few feet.

Once that location is determined, the trajectory can be extrapolated from that data in conjunction with the location and movement of the victim's vehicle.

A reasonable, competent, and knowledgeable person familiar with shooting reconstruction methodology should have been able to reach conclusions on the location of the shooter and present their opinions to the jury using the scientific method of forensic investigation.

At this point it is unexplainable why the application of generally accepted methodology was not employed by police investigators or why defense counsel did not retain such an expert on behalf of the defendant.

#### **18. Sound of Engine Running.**

I feel compelled to address what apparently was an issue that involved the sound of the vehicle that Mr. Jennings stated he heard. Mr. Ehrlich's letter provides some background on this in explaining that the issue was not that he heard the vehicle idling, but that he heard the engine when it was first started, with the possibility that the engine accelerated due to depression of the accelerator pistol during the shooting incident.

This is an area which I have been involved in with many shooting incidents and I have been personally involved in the acoustic reconstruction of sounds heard by ear witnesses.

One of the reasons that police officers are prohibited by their department Policy and Procedure from shooting at a motor vehicle is for the very reason that the operator can become disabled and cause the vehicle to continue on, in many instances accelerating, as they react to a wound and depress the accelerator.

A recent case of such an occurrence was in the City of Dothan, Alabama where a police officer shot the operator numerous times who was stopped. The vehicle then accelerated through a parking lot, over a curbing, crossed a busy roadway nearly missing vehicles and went through the brick wall of a business injuring a person inside.

It would not be unusual for this to have occurred.

Secondly, the fact that a police officer could not hear the vehicle idling and was allowed to testify to that is absurd. Hearing is subjective and speculative.

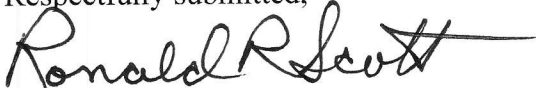
The generally accepted methodology for conducting an acoustic reconstruction is with the type of equipment used for noise recording such as where there is a citizen group complaining of some condition. The testing is conducted by an acoustics engineer with very high end equipment and the test must replicate the exact conditions present at the time of the incident.

The testimony of a police officer giving an expert scientific opinion without any scientific parameters being documented should have been challenged in a Daubert Motion. The defense counsel should have employed an acoustic engineer to document and record scientific acoustic data using generally accepted methodology.

19. **Right to Amend.**

I reserve the right to amend or add to this report if additional evidence or medical data is received.

Respectfully submitted,

  
Ronald R. Scott, M.A., M.S.