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July 14, 2016

Thomas R. Donohue, Esq.  
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699 Boylston Street, 12<sup>th</sup> Floor  
Boston, MA 02116

**Re: Stamps v. City of Framingham**

Dear Attorney Donohue:

I am writing to provide my report in the above-referenced matter.

**Preparation for Rendering Opinions.** In preparation for rendering opinions in this matter I reviewed a quantity of written materials, including police incident, crime scene and investigative reports and materials; Framingham Police Department Internal Affairs file materials, including Lt. Hill's May 31, 2011 Internal Affairs Report ("Memorandum") to Chief Carl; autopsy report and four CD's of photographs; scene and evidence photographs; interviews of Officer Paul Duncan, Dennis Avila, Jeff Beckwith, Steven Casey, Brian Curtis, Jeffrey DeRosa, Robert Downing, Chris Eliadi, Nicholas Ferry, Matthew Gutwill, Joseph Hicks, David Kay, Christopher Langmeyer, Phil Martinez, Christopher Murtough, Timothy O'Toole, Greg Reardon, Sean Riley, Jorge Ruiz, Robert Scibilio, James Sebastian, Mike Sheehan, Kevin Slattery, Vincent Stuart, and Devon Talbert ; depositions of Ofcr. Paul Duncan, Sgt. Vincent Stuart (two days), Devon Talbert (no show), Dr. Nields, James Gannalo, Barbara Wolf, M.D., Vincent De Maio, M.D., Kim Widup, Dwayne Barrett, Joseph Bushfan, Normal Bushfan Stamps (Part 1), Steven Carl, Craig David, Robert Downing, Matthew Gutwill, Christopher Langmeyer, Timothy O'Toole, Sean Riley, Brian Simoneau, James Sebastian, Michael Sheehan, all with exhibits; transcript of 911 call; gloves report; drug laboratory report; firearms identification section report (addendum), photographs of firearms, State Police reports; evidence inventory sheet, death certificate, Middlesex District Attorney's Report, Pre-Hospital Care Report, EMT report/documents; after-action report, crime scene report, SWAT sketches and photos of scene; photos of apartment before shooting (and other photos of apartment), color SWAT photos, color State Police photos, report of James M. Gannalo with attached qualifications, report and qualifications of Kim R. Widup, report and curriculum vitae of Barbara C. Wolf, M.D., list of testimony of Barbara C. Wolf, M.D.; report, correspondence and diagram prepared by Kevin Lally; report of Steve Ijames; Sgt. Stuart letter to Chief re. Ijames report; one-page statement re. meeting with Chief; report of Vincent J.M. Di Maio, M.D.

I also reviewed, and will comment on below, a series of color images or artistic renderings prepared by or on behalf of plaintiff's expert James Gannalo, apparently purporting to depict how he opines this shooting occurred.

In addition, on June 17, 2016 I inspected the incident M4 carbine at Framingham Police Headquarters, and visited the scene of the incident in Framingham with Officer Duncan. Using the actual incident M4 carbine with the same single-point sling used during the incident, I had Officer Duncan do a "walk-through" of the incident. I also reconstructed the shot in the room where Officer Duncan says it occurred using Officer Duncan, the M4 carbine, and an individual lying on the floor to approximate Eurie Stamps. Further details of my inspections and reconstruction are provided below.

Also on June 17, 2016, I fired the incident M4 carbine on the Framingham Police Department range, at which time a video was made to demonstrate how, even with the M4's selector lever on "SAFE" and the user's finger outside the trigger guard, a contraction of the user's hand could, in a fraction of a second, simultaneously result in the selector lever being moved to the "FIRE" ("SEMI") position, the trigger finger entering the trigger guard, and the trigger being pulled to fire the weapon.

**Qualifications for Rendering Opinions.** In addition to the review of documents, scene visit, evidence inspection, and other activities described above, I am also relying on some 58 years of experience with firearms, the last 36 of which have been as a professional instructor and instructor-trainer in firearms, tactics and use of force, primarily for law enforcement officers, agencies, and instructors. I was an instructor at the Burlington County (New Jersey) Police Academy and was certified as an instructor by the New Jersey Police Training Commission from approximately 1986-1995. I taught at the Allentown (Pennsylvania) Police Academy, including teaching the Act 120 recruit curriculum segments entitled "Use of Force in Law Enforcement" and "Firearms," from approximately 1999-2007, during which time I was certified as an instructor by the Pennsylvania Municipal Police Officers Education & Training Commission. I have trained police officers and instructors, industrial and corporate security personnel, executive protection officers, military personnel, and private individuals in the use of firearms and a wide range of use of force topics throughout the United States from the early 1980's through the present time. I taught a course entitled "Police Use of Force" in the Criminal Justice Department of Indiana University in Bloomington, Indiana for two years while I lived in Indiana. I also taught classes addressing that subject at annual and regional training conferences of the International Association of Law Enforcement Firearms Instructors (IALEFI), the American Society of Law Enforcement Trainers (ASLET), and the International Law Enforcement Educators and Trainers Association (ILEETA), among other venues. I was contracted by the federal government to teach use of force standards in a series of Senior Firearms Instructor classes for the federal Bureau of Alcohol, Tobacco & Firearms, taught at various locations on the East and West Coasts. Other law enforcement agencies for which I have conducted instructor-level training in firearms, tactics and use of force include the New York State Police, Oregon State Police, Louisiana State Police, Missouri Highway Patrol, Washington, D.C. Metropolitan Police, Toronto Metropolitan Police (Emergency Task Force and Dignitary Protection Unit), NYPD, Calgary Police Service (Tactical Unit), and the Police Departments of Philadelphia, Baltimore, Jersey City, Trenton, Atlantic City, Miami, Jacksonville, St. Petersburg, Seattle, Tacoma, Spokane, Phoenix, Dallas, the Salt Lake County Sheriff's Office, Henrico County (VA) Police Department, and many others.

In Massachusetts, I have taught firearms and tactics programs for the Massachusetts Criminal Justice Training Council, the Massachusetts Metropolitan Police, and a tactical shotgun course in Harvard, Massachusetts. In neighboring states, I have co-instructed in a police shoulder weapon course at the State of Connecticut Police Training Academy in Meriden, co-instructed a police countersniper-rifle course hosted by the Glastonbury Police Department, taught several law enforcement armorers courses in North Haven, Connecticut and other locations, and taught several courses in Rhode Island.

With further regard to my use of force training, experience and expertise, I served on the Curriculum Development Committee that wrote the firearms and use of force curriculum that has been used at police academies throughout the Commonwealth of Pennsylvania for the past 14 years, and have recently assisting the Commonwealth in the revision and updating of that curriculum. I have also taught instructor-training courses for the Pennsylvania Municipal Police Officers Education & Training Commission ("MPOETC") at the Pennsylvania State Police Academy, Fort Indiantown Gap, and other locations; have served on the committee that established Patrol Rifle Guidelines (a "patrol rifle" being rifles or carbines such as the M4 involved in this incident) for the Commonwealth of Pennsylvania; and have most recently served on the MPOETC committee that created a mandatory in-service Use of Force training program (including teaching a pilot course and instructor-training course) currently being taught to some 25,000 police officers throughout Pennsylvania.

I have served as a sworn reserve deputy sheriff or special deputy sheriff for two sheriff's departments over the past 19 years, have served as a firearms and use-of-force instructor at both of those departments, and have had first-hand experience in a wide range of law enforcement activities, including routine calls for service, traffic enforcement, response to domestic disturbances, response to crimes in progress, service of search warrants and arrest warrants, prisoner transports, vehicular pursuits, foot pursuits, barricaded gunman situations, and arrests of armed suspects at gunpoint. I have carried and used handguns, shotguns and patrol rifles in my law enforcement service, as well as batons and pepper spray.

I have, for almost 30 years now, served on the Board of Directors of IALEFI (the International Association of Law Enforcement Firearms Instructors), and am currently First Vice President of that organization. IALEFI promulgates and publishes standards relating to law enforcement firearms and use of force training, and conducts police firearms and use of force training programs, including a week-long Annual Training Conference attended by law enforcement firearms instructors from all parts of the world. In recent years, IALEFI has conducted 20-25 police training programs annually at locations throughout the United States, as well as programs in other countries.

In addition to multiple certifications I have held as a police firearms instructor (FBI, NRA, NJPTC, Pennsylvania MPOETC, Glock, H&K and others), I have been certified as a police defensive tactics instructor (defensive tactics being the system of "empty hand" or "hand-to-hand" self-defense and subject control methods taught to police), baton instructor (for several types of batons), weapon retention instructor, pepper spray instructor, less lethal impact munitions instructor, Taser Master Instructor, psycho-motor skill design instructor, trained in pursuit and defensive driving techniques, and certified as an executive protection specialist. I am thus trained in the entire range of police use-of-force skills, most of them to the instructor level.

I am certified as a force science analyst, and I have regularly testified in courts for many years on force science issues. In fact, I was court-qualified as an expert, and testified on these issues, for several decades before any certification was offered in the field now known as force science. The field of force science is the application of scientific principles, research and testing to confrontations in which force is used by police officers or others. Force science involves such things as an individual's perception and evaluation of deadly threats, human factors such as reaction time, the speed with which one can cover a certain distance on foot, turn, draw and/or fire a gun, the speed at which multiple shots can be fired, the relative speed of one individual's action compared to another individual's reaction to it, and the perceptual and physical changes commonly experienced by individuals during high-stress use of force confrontations, sometimes described as part of the "fight or flight response" or "body alarm reaction"

("BAR"). These stress-caused reactions, including such things as increased rates of respiration and heart rate, loss of fine motor ability, tunnel vision, and auditory exclusion, have been well researched for years, are the subject of numerous articles in scholarly, scientific and professional journals and books, and have been part of the curriculum taught to law enforcement officers, instructors, and criminal justice students nationwide for decades (some of which curriculum I have helped to write and teach). In many respects, these well-recognized stress effects also form the basis for the firearms and tactics techniques in which law enforcement officers are trained, as the officer's abilities – and disabilities – under stress must be taken into account in designing and selecting techniques the officer is expected to use in the stress of defensive confrontations.

I am also certified as a shooting scene reconstructionist. I have regularly testified in courts for many years on issues of shooting scene reconstruction, both before and after I received certification in that field. The field of shooting scene reconstruction makes use of physical evidence, scientific knowledge and investigation to reconstruct how a shooting likely occurred, including the directions and locations from which shots were fired, the trajectories of the projectiles, the order of the shots when possible to be determined, ricochets, the effects of intervening barriers such as window glass, clothing, or partitions, the speed with which the shots were or could have been fired, movement of the involved individuals during the shooting, whether a shooting appears to have been accidental, etc. The physical evidence used includes such things as the location, direction and characteristics of bullet damage to physical objects, the location, direction and characteristics of bullet wounds to people, the location of ejected cartridge cases and other ballistic evidence, the inspection and characteristics of the firearms used, the known ballistics of the firearms and cartridges, chronographing, ejection pattern testing, proximity-to-muzzle testing, testing for lead and gunshot residue, video evidence when available, witness interviews and testimony when available and to the extent deemed reliable, etc.

This case involves the use of an M4 carbine. The M4 is a shortened version of the M16 and AR-15 rifles that have been in military, law enforcement, and civilian use since the 1960's. I have owned and used numerous AR-15, M16 and M4 carbines and rifles for the past 35 years or more. I am certified to instruct law enforcement officers in the use of these rifles, and have been trained and certified by Colt Firearms as an armorer of the AR-15, M16, and Colt SMG weapon systems. Colt Firearms selected me to officiate at its first Colt Cup rifle match, in which AR-15 rifles were used. I have written published articles about AR-15s and other patrol rifles and carbines. I have taught patrol rifle courses in which I have trained and qualified law enforcement officers to use AR-15 type patrol rifles, and have conducted instructor courses in which I have trained and certified law enforcement instructors to, in turn, train their own agencies to use these rifles. I have taught the use of patrol rifles to tactical team ("SWAT") officers both here in the U.S., and in Canada. I have also taught an instructor course for the Louisiana State Police with the Colt SMG, a submachine gun that utilizes the same receiver, trigger, and safety/selector lever configuration as the M4, and thus involves the same tactical safety and use issues presented in this case. I have served as a subject matter expert on the Commonwealth of Pennsylvania's Municipal Police Officers Education & Training Commission committee that developed the Patrol Rifle Guidelines distributed to law enforcement agencies throughout the state. I have also been qualified with, carried and used AR-15 rifles on duty in the two sheriff's departments with which I have served over the past 19 years.

If this shooting occurred as Officer Duncan has stated and testified, this case involves the issue of a possible involuntary muscular contraction of Officer Duncan's hand, resulting in an unintentional discharge of the M4 carbine as Officer Duncan lost his balance while approaching Eurie Stamps. I first testified on the subject of involuntary muscular contraction resulting in the unintentional discharge of a

firearm in a homicide case in 1988. Since that time I have worked in approximately twenty (20) cases in which this phenomenon has been an issue, including both criminal and civil cases, in state and federal courts throughout the country. I co-instructed with Dr. Roger Enoka on this subject at the Annual Training Conference of the International Association of Law Enforcement Firearms Instructors (IALEFI) in Mesa, Arizona in 1991, and in that same year also taught on the subject at an IALEFI Regional Training Conference in Dutchess County, New York. I first published an article on this subject in the IALEFI journal, The Firearms Instructor, in 1991. The widely-distributed reference work, Standards & Practices Reference Guide for Law Enforcement Firearms Instructors (IALEFI 1995), of which I am the Associate Editor, contains several entries on this and related topics. This volume has been reprinted numerous times since it first appeared in 1995, and has, among other things, been purchased in quantity by the U.S. Department of Justice for inclusion in U.S. District Court law libraries throughout the country. Over the past 25 years I have taught on the topic of involuntary muscular contraction and unintentional discharge in numerous training programs for law enforcement officers, instructors, criminal justice students at the university level, prosecutors and others in the criminal justice system. In addition to the training programs mentioned above, I have taught on this topic at the Annual Training Conference of the American Society of Law Enforcement Trainers (ASLET) in Milwaukee in 1992; to a meeting of the American Society for Industrial Security in 1994; to statewide conferences of firearms instructors conducted by the North Carolina Justice Academy in 1993 and 2006 (with approximately 250 law enforcement firearms instructors in attendance), in a series of Senior Firearms Instructor Courses I was contracted to teach for the federal Bureau of Alcohol, Tobacco & Firearms on the East and West Coasts throughout the period 2002-2005, in a Firearms Instructor Update Program I taught for the Pennsylvania Municipal Police Officers Education & Training Commission at the Northeast Counter-Drug Training Center at Fort Indiantown Gap in 2001, in a presentation to the Lehigh County Municipal Emergency Response Team at DeSalles University in 2004, and at a conference of the Westchester County (NY) Detectives Association in 2007. These are just a few of the many training programs in which I have taught on this topic over approximately the past 30 years. I have also written numerous lesson plans, training curricula, training course materials, and law enforcement agency firearms policies that address the issue of involuntary muscular contraction.

Regarding my work as an expert witness generally, I have served as an expert in some 300 cases, and have testified roughly sixty (60) times at trials in state and federal courts throughout the United States, in addition to testimony before grand juries, administrative tribunals including the federal General Accounting Office Board of Contract Appeals, state legislative committees, by invitation before committees of both Houses of Congress, and in numerous depositions. I have never failed to be qualified (accepted by the Court) as an expert witness in any trial in which I have been proffered for that purpose.

My consulting and expert witness clients have included the U.S. Department of Justice, several federal law enforcement agencies, the Department of the Army, Department of Defense, Department of Energy, the Attorneys General of several states including Pennsylvania, Wyoming, South Dakota, and Georgia, the Delaware Department of Justice, the Milwaukee District Attorney's Office, and sizeable cities or counties and their law enforcement agencies, including New York City, Chicago, Nashville, Palm Beach County FL, Prince George's County MD, San Diego County CA, Pima County AZ, Pittsburgh, Bridgeport, and others. In addition to serving as an expert on behalf of law enforcement agencies and officers, I have also testified against law enforcement officers and agencies in cases resulting in jury verdicts or settlements for plaintiffs wrongfully injured by police. By the same token, while I have often served as a state's witness in criminal prosecutions, I have many times served as an expert witness for defendants in criminal cases. I have taken cases, and testified both for and against, firearms

manufacturers, holster manufacturers, shooting ranges and gun clubs. In other words, my work as an expert witness is not "one sided." I am willing to state that a police officer's or police department's conduct was wrong when that is my opinion. Because of this, I have many times been asked by prosecutors to perform independent evaluations of officer-involved shooting cases, to assist them in determining whether or not the officer(s) involved should be criminally charged.

Further details of my education, training, experience and qualifications are contained in my curriculum vitae, provided along with this report.

### **Discussion and Analysis**

**The Incident.** As a preliminary matter, I note that I have distilled the following summarized description of the event from Framingham Police Department records, and from the interview and deposition of Officer Paul Duncan. It is not my job as an expert, and not within the scope of my expertise, to judge the credibility of witnesses, including the credibility of Officer Duncan, except to the extent that I may find a particular aspect of a witness's account to be consistent or inconsistent with the physical evidence, or with specific knowledge within my areas of expertise. Ultimately, the finder of fact will decide whether it believes the account of Officer Duncan, or any other witness, to be credible, and therefore whether it believes any opinions I offer that are based on that account, to be persuasive. With this in mind, the following description of the event is provided only as a basis for the discussion that follows.

The incident occurred after midnight on the night of January 5, 2011, when officers of the Framingham Police Department ("FPD") executed a search warrant for the first floor apartment at 26 Fountain Street in Framingham, Massachusetts. The search warrant had been issued because it was believed that dealing in illicit drugs was taking place at the premises. Two groups of FPD SWAT Team members entered the building via the front hallway, one group entering the apartment through the door from the front hallway into the living room, the other group through the door at the end of the front hallway that opened into the apartment's kitchen. Officer Paul Duncan, a SWAT Team member, was part of the group that entered through the door into the living room. After entering, Officer Duncan proceeded from the living room into the den, and from the den into the kitchen. In the kitchen, he saw Mr. Eurie Stamps on the floor of a dark hallway area that was between the kitchen and several other rooms, those being a bathroom, a closet, and a bedroom. Mr. Stamps had been ordered to the floor by members of the SWAT Team group that had entered through the kitchen door. That group of officers had then gone past Stamps into the rear of the apartment. Officer Duncan was directed to go forward into the kitchen by Sgt. Stuart, who nodded for Duncan to go into the kitchen after they heard the officers ahead of them call for a "trailer." According to Officer Duncan, Stamps was prone on the hallway floor, with his elbows on the floor and his hands above his head. Duncan and Stamps made eye contact. It was apparent to Officer Duncan that the other officers who had continued beyond Stamps to search the rear of the first floor had not searched Stamps nor the area around him, which was dark and contained bins and clutter within reach of Stamps. Concerned that Mr. Stamps might reach for a weapon, Officer Duncan decided to approach Stamps and restrain his hands behind his back. Using his M4 carbine to cover Mr. Stamps as he approached him, Officer Duncan entered the hallway, and stepped to his right of Stamps. It was Officer Duncan's intention to kneel down and restrain Stamps' hands behind Stamps' back. However, before he could do that, Officer Duncan lost his balance and fell rearward and to his (i.e., Duncan's) left side. As he fell, Officer Duncan let go of the forend of the M4 with his left hand, continuing to hold the weapon by means of his right hand only. As he fell, the M4 carbine discharged, with the bullet striking and ultimately resulting in the death of Mr. Stamps.

Officer Duncan has stated and testified that he did not intentionally fire his rifle, but that the shot was unintentional. He has also stated and testified that prior to falling his trigger finger was outside the trigger guard, and the M4's selector lever was in the "FIRE" (semi-automatic) position, in keeping with his training and the policy of the Framingham SWAT Team. That policy, which was communicated through training and not in written form, was that the officer should have the selector lever in the "FIRE" position when the officer was the first to enter a room during an operation such as this, and when the officer "perceived a possible threat."

**Officer Duncan's M4 Carbine.** The M4 carbine is the Colt designation for a shortened variation of the 5.56mm caliber, M16A2 service rifle. Both are in widespread use by our military forces. Along with the semi-automatic ("civilian") version, generally referred to as the AR-15, these rifles are also widely used by law enforcement agencies throughout the United States, Canada and other countries. The term "carbine" means a short rifle, although there is no precise length specification as to what length of rifle is properly termed a "carbine." As carbines are thus a subset of rifles, the two terms will be used interchangeably throughout this report. The M4 carried by Officer Duncan fires the 5.56mm cartridge, which uses a bullet of approximately .22 caliber.

The M4 used by Officer Duncan is what is called a "selective-fire" weapon, meaning that it can be fired either in a semi-automatic mode (i.e., firing one shot for each separate pull of the trigger, with the trigger having to be released between each shot and the next), or in the fully-automatic mode (i.e., firing continuously as long as the trigger is pulled and held to the rear). Officer Duncan's M4 utilized a 30-round detachable box magazine, which most trained users (including Officer Duncan) load with 28 rounds. On the left side of the rifle's receiver (or frame) is a lever known as the selector lever, usually operated by a right-handed user's right thumb. When the selector lever's indicator is pointing forward toward the word "SAFE" which is stamped into the rifle's receiver, the rifle is said to be "on SAFE," and the rifle will not fire if the trigger is pulled. If the selector lever is rotated clockwise 90 degrees so that its indicator is pointed upward toward the word "SEMI," the rifle is said to be "off SAFE" or in the "FIRE" position, and the rifle will fire in the semiautomatic mode (one shot for each trigger pull) if the trigger is pressed. If the selector lever is rotated clockwise another 90 degrees so that its indicator is pointed rearward (to the word "AUTO" (or "FULL" on some rifles), the rifle is said to be "on FULL AUTO," and will fire in the fully automatic mode -- that is, a continuous series of shots -- if the trigger is pulled and held depressed.

When inspected after the incident, Officer Duncan's M4 carbine had one "round" of ammunition (i.e., live cartridge) in the chamber, and 26 rounds in its magazine. Including the one round that was fired, that would indicate that the magazine had initially been loaded with 28 rounds before the one round discharged in this incident was fired. Officer Duncan's two additional magazines were loaded with 28 rounds each, which is consistent with the condition in which the rifle was found to be loaded after the incident.

During this incident, Officer Duncan had the selector lever of his M4 carbine in the "SEMI" position, meaning that the carbine would fire one shot if the trigger were to be pressed fully to the rear. The practice of tactical team members and other law enforcement officers placing the selector levers of their rifles in the "SEMI" or "FIRE" position during tactical operations such as this will be discussed more fully below.

When I inspected the incident M4 carbine on June 17, 2016, using standard trigger-pull weights the trigger pull in the semiautomatic mode was 7-1/4 to 7-1/2 pounds, with the full-automatic trigger pull in the range of 10-1/2 to 11 pounds. Using an electronic digital force gauge, the force required to move the selector lever from the "SAFE" to the "SEMI" (or "FIRE") position averaged about 3.9 pounds, with the lightest weight I measured being 3.6 pounds, and the heaviest 4.2 pounds.

**Involuntary Muscular Contraction as a Possible Cause of Unintentional Discharge of Firearms.**

Decades of extensive empirical evidence in the law enforcement field has proven that a number of stimuli can result in the contraction of a firearms user's hand and fingers, resulting in the unintentional discharge of a firearm being held in the hand. See, e.g., Standards & Practices Guide for Law Enforcement Firearms Instructors, P. Covey and E. Kapelsohn (IALEFI, 1995), "Unintentional Discharge" (p. 295) and "Trigger Finger Dilemma" (p. 293) and authorities cited therein; In Defense of Self and Others, U. Patrick (FBI, ret.) and J. Hall (FBI, ret.), (2005), pp. 131-132.

The scientific basis for such unintentional discharges is well understood, and is supported by numerous articles in the scientific literature. See, e.g., "Involuntary Muscle Contractions and the Unintentional Discharge of a Firearm," R. Enoka, Ph.D., Department of Integrative Physiology, University of Colorado, Law Enforcement Executive Forum, February 13, 2003 (and other sites) and numerous authorities cited therein.

Although involuntary muscular contraction is an accepted physiological occurrence, I note that plaintiff's expert James Gannalo mentions on page 15 of his report "studies made by Federal Agencies (FBI, DEA, ATF), the Force Science Institute, and the German National Police..." However, Mr. Gannalo fails to provide any citation to these studies, so that others can review them. If he is relying on the studies, as he obviously is, citations to the supposed studies should be provided.

As discussed above in the "Qualifications to Render Opinions" section of this report, I have taught and written on this subject of involuntary muscular contraction as a cause of unintentional discharge of firearms for the past 25 years or more, including co-instructing with Dr. Roger Enoka, one of the world's foremost scientists who has researched and written about this phenomenon. In addition, I have served as an expert in approximately twenty (20) cases where involuntary muscular contraction appears to have caused the unintentional discharge of a firearm.

The three stimuli that are most widely recognized and accepted as resulting in involuntary muscular contraction of the hand are: (1) the **startle response**, (2) **interlimb interaction** (or so-called "sympathetic grip"), and (3) **postural disturbance (or loss of balance)**. See Enoka, supra. Involuntary muscular contraction of the hand can also result when something unexpectedly contacts the gun, hand, or arm of the individual holding the firearm, and the individual tightens their grip in order not to lose control of the firearm. (Cf. work of Professor Roland S. Johansson, University of Umea, Sweden.) I have worked in several cases where an involuntary contraction caused in this last manner has resulted in the unintentional discharge of a firearm.

In addition, in this incident when Officer Duncan lost his balance and began to fall, he says he took his left hand off the forearm of his rifle, as he says, to try to catch or protect himself as he fell. This would, in and of itself, naturally cause him to tighten his grip on the rifle with his right hand that was now holding the rifle unassisted by his left hand. A tightening of his dominant-hand grip in this manner, and the change in the rifle's balance, would make it more likely that his index finger would contract into the rifle's trigger guard, with the possibility that it would pull the trigger.



The possibility that a firearm can be unintentionally discharged in these ways is a major reason that, largely through the efforts of leading firearms trainers (including myself) over the past 25-30 years, the law enforcement communities of the United States and other countries have begun training, and requiring, law enforcement officers to keep their fingers outside the trigger guards of their firearms, and braced on the frame or some other part of the weapon (in so-called "register" position, or "indexed") until the gun is pointed at the intended target and the officer has decided to fire. In prior years, it was common for officers who were covering suspects with their service sidearms, for example, to do so with the officer's finger on the weapon's trigger, and neither firearms training nor agency policy prohibited such a practice.

Today, and going back at least to the mid-1980's, the "Four Cardinal Rules of Firearms Safety" have included the above rule as accepted safety doctrine. For example, Rule 3 of these rules, as distributed and used by the International Association of Law Enforcement Firearms Instructors at its training conferences and courses for at least the past 25 years, reads:

Keep your finger off the trigger and outside the trigger guard until  
your sights are on target and you have decided to fire.

Nationwide, thousands of police departments, police academies, and law enforcement firearms instructors use the above rule, or some minor variation of it.

It is important to understand that when an involuntary muscular contraction, resulting in unintentional discharge of a firearm, occurs, not only has the firearms user not volitionally willed the gun to fire, he or she cannot will it not to fire. The contraction of the user's hand and trigger finger are truly involuntary, as it results from a contraction of the hand over which the individual has no control. See training video, "Involuntary Discharge," Arizona Training Quarterly, ALEOAC.

Officer Duncan has said that he did not know at first that the shot he had heard was his own rifle firing. In my experience, this is often the case when a shot is fired unintentionally as a result of an involuntary muscular contraction, as the individual has made no decision to fire, and does not realize that his or her hand has contracted and fired the gun. And see, "No Recall of Weapon Discharge," by Alexis Artwohl, Ph.D., Law Enforcement Executive Forum, Vol. 3, No. 2, pgs. 41-49 (2003), and authorities cited therein.

**Indexing the Trigger Finger in "Register" Position Will Reduce, But Does Not Eliminate, the Chance of Unintentional Discharge When the Hand Contracts.** Keeping the finger off the trigger, outside the trigger guard, and indexed in "register" position will certainly reduce the incidence of unintentional discharges, as compared to the number of such discharges that would occur if the finger were resting on the trigger when an involuntary muscular contraction occurred. However, keeping the finger in register cannot be expected absolutely to eliminate all unintentional discharges caused by involuntary muscular contraction, either due to the trigger finger slipping into the trigger guard without the officer being aware of it prior to an involuntary muscular contraction, or the trigger finger doing so as the result of an involuntary muscular contraction. See, "Towards an Understanding of Involuntary Firearms Discharges: Possible Risks and Implications for Training," C. Heim, D. Schmidtbleicher, and E. Niebergall, Policing: An International Journal of Police Strategies & Management, Vol. 29, Issue 3 (2006); "Involuntary Firearms Discharge – Does the Finger Obey the Brain?", C. Heim, E. Niebergall, and D. Schmidtbleicher, The Firearms Instructor, Issue 43; "Can You Really Prevent Unintentional Discharges?",

Force Science News #3, Force Science Institute, [www.forcescience.org](http://www.forcescience.org); "Unintentional Discharges, Finger off the Trigger?", S. Bohrer, Police Marksman, January/February 2004; "The "Enoka" Reflex, "Indexing", and Traditional Bolt Action Rifles," The Art of the Rifle, posted November 13, 2012.

Regarding the practice of indexing the trigger finger outside the trigger guard, and its lack of efficacy in absolutely preventing unintentional discharges due to involuntary muscular contraction, Dr. Enoka wrote the following:

...to place the index finger outside the trigger guard and along the barrel of the gun until a decision has been made to discharge the weapon ... Due to the organization of the muscles that control finger movements, however, this is not a fail-safe procedure. The fingers are controlled by a combination of small muscles in the hand and larger muscles in the forearm. To hold a handgun in a firing position, a person will use the hand muscles and the muscles on the front of the forearm (palm side) to grip the gun and a small muscle on the back of the forearm to keep the finger extended alongside the barrel. If events evoke involuntary muscular contractions that cause the person to grip the gun more tightly, the force exerted by these muscles could overwhelm the action of the relatively small muscle that is used to keep the index finger straight alongside the barrel of the gun. Furthermore, it is difficult even with voluntary contractions to perform a movement with a single finger that does not influence the forces exerted by the other fingers. (Kilbreath & Gandevia, 1994; Kilbreath, Gorman, Raymond & Gandevia, 2002; Li, Danion, Latash, Li & Zatsiorsky, 2001). As a consequence of these effects, the index finger could be forced to join in the gripping action **and it could even slip inside the trigger guard and depress the trigger.** (emphasis added)

There is ample empirical evidence in the law enforcement field demonstrating that the possible occurrence described above by Dr. Enoka does, in fact, occur, both in training exercises and in tactical situations. Consider, for example, the incident recounted by Mike Conti, a prominent firearms instructor and author of several published works on firearms training. After serving for three years in the U.S. Army, Conti began his 24-year career with the Massachusetts State Police ("MSP"), where his assignments included being a member of the SWAT Team, and being Director of the Firearms Training Unit. He retired from the MSP with the rank of Lieutenant in 2010, and joined the Massachusetts Institute of Technology's Department of Athletics as firearms instructor and Rangemaster. While serving with the MSP, Conti encountered two car thieves in a parking structure in Boston. With his service pistol in hand, Conti became engaged in a physical struggle with one of the thieves on a stairway. Well aware of the possibility of an involuntary muscular contraction – a danger he himself taught to his troopers as their firearms instructor – Conti took pains to keep his finger well away from the trigger, braced on the trigger guard as MSP's training dictated. However, at the point where Conti exerted considerable force with his opposite hand to take the car thief to the ground, he heard his pistol discharge. Despite his conscious placement of his index finger in register position on the trigger guard, his finger had slipped into the trigger guard during the takedown, and had fired his 9mm Sig Sauer Model P226 service pistol – a feat requiring trigger travel (rearward movement of the trigger) approaching half an inch, overcoming a trigger pull weight in the range of some 10-12 pounds. Luckily, in Conti's case the unintentionally-fired bullet did not strike anyone. Clearly, if the trigger finger can contract from register position to enter the trigger guard and fire the weapon even for an officer like Mike Conti who is consciously trying to keep

his finger outside the guard, it can certainly happen to officers who are, as would normally be expected, concentrating instead on the tactical tasks at hand.

Due to the recognized possibility of a finger that is braced on the weapon's frame or trigger guard contracting into the guard and pulling the trigger during an involuntary muscular contraction, the Orlando Police Department for years taught that the trigger finger could, instead, be placed underneath the trigger guard. In this position, even the strongest involuntary muscular contraction of the hand would not result in the finger contracting into the trigger guard. Frank Repass, an Orlando Police Department firearms instructor and SWAT Team leader with 20 years of SWAT experience, went on to teach this same "underneath the trigger guard" method when he retired from Orlando and became the lead firearms instructor for the security forces at Kennedy Space Center.

Gary Klugiewicz, a leading police defensive tactics instructor who served a lengthy career with the Milwaukee County Sheriff's Department, teaches officers engaging in "active countermeasures" (e.g., take-downs of suspects) while the officer has a firearm in his hand to transfer the firearm into a non-firing position in the officer's non-dominant hand. Among other things, this is to reduce the likelihood of unintentional discharge due to involuntary muscular contraction during the strenuous physical actions involved in the active countermeasures. Klugiewicz also notes that he has seen many unintentional discharges of Airsoft and Simunitions FX weapons in active countermeasures and other physical struggles in training exercises, by trainees who had been observed to have their trigger fingers positioned outside the trigger guards prior to the discharges.

Dave Young, whose experience with weapons includes corrections and law enforcement, nine years in the Marine Corps, and currently working as the chief instructor in physical skills throughout the country for Vistelar Group, similarly reports that he has seen many situations where an officer's trigger finger that was outside the trigger guard prior to a fall or a struggle then entered the trigger guard, sometimes discharging the training weapon, during a fall or other strenuous activity. Young has even gone further in some exercises by chalking the triggers of training weapons (he says he used to use shoe polish on the triggers when he conducted this training in the Marines), and then examining the trainees' fingers after the exercise. Chalk (or shoe polish) on the fingertip would then evidence the fact that the trainee's finger had gone onto the trigger, even if the finger had not applied enough force to fire the weapon. Young reports that he has seen numerous instances of chalk or shoe polish on fingers, despite the rule to keep the finger outside the trigger guard until the decision to fire is made.

It can easily be demonstrated that if the hand contracts strongly, a finger which has been placed on the trigger guard or on the frame (receiver) of an M4 or AR-15 can contract into the trigger guard and press the trigger. In the demonstrative video I made on June 17, 2016 using the subject M4 on the Framingham Police Department range, one can see the ease with which the trigger finger placed on the M4's frame can contract into the trigger guard and fire the rifle. I note that Officer Duncan's hand and index finger are somewhat shorter than mine, which will make it even more likely for his finger to contract into the trigger guard than mine, because his finger would have less purchase (overlap) on the rifle's frame than mine before contracting. In addition, Officer Duncan was wearing gloves at the time of the incident. The effect of gloves is to place the user's hand slightly further to the rear on the M4's pistol grip, resulting in even less purchase (overlap) of the trigger finger on the rifle's frame. Each of these factors makes it more likely for an unintentional discharge to occur, despite the fact that the trigger finger is positioned outside the trigger guard before an involuntary muscular contraction occurs.

**“Safety On” or “Safety Off” Mode with M4 Carbine and AR-15 Rifle.** The FPD written policy in effect at the time of this incident did not address whether, when, and under what conditions the M4 carbine’s selector lever should be positioned in the “SAFE,” “SEMI” (“FIRE”), or “AUTO” (full automatic) position. Accordingly, with no written policy to direct his actions, Officer Duncan would have to rely on the training he had received with the M4 or AR-15 for guidance.

Lt. Hill, in his internal affairs report on this incident, has stated that FPD officers were trained to have the M4’s safety in the “SEMI” (“FIRE”) position when they “are the first to enter a room” and when they “perceive a possible threat.” Lt. Hill further stated in his report, “Duncan articulated valid reasons for him to consider Stamps to be a potential threat.” And when Sgt. Stuart, in his January 13, 2014 deposition, was asked by counsel to state “everything officers were taught as to what constitutes a perceived threat to allow them to put their weapon off safe,” Stuart’s answer was, “That’s very wide open ... I don’t know all of the training he’s received. I can’t speak on that ...” (See Stuart Deposition, page 12.) Clearly, a standard that allows an officer to take his rifle off safe when he “perceives a possible threat” is one that allows the officer, within reason, to exercise his or her own discretion, as Officer Duncan did here.

These FPD standards for when the M4 operator should have the selector lever in the “FIRE” position were not only in use prior to the Stamps incident, but thereafter as well; Lt. Hill noted: “Other officers and I were instructed in this manner during refresher training with the M-4 on 5/18/11 by Sergeant Vincent Stuart.”

I note that Officer Duncan appears to have been the “first to enter” the living room and den of the first floor apartment at 26 Fountain Street. Accordingly, per the FPD policy, it was proper for him to have the selector of his M4 in the “SEMI” (or “FIRE”) position as he moved through those rooms. More importantly, Officer Duncan “perceived a possible threat” from Stamps, who had not been searched, whose hands were not controlled, and who could easily have had a weapon within reach, either on his person or in the clutter of the hallway. Thus, although differences of opinion have been voiced within his agency on this topic, Officer Duncan appears to have been within his agency’s policy in having the selector lever of his M4 in the “SEMI” (“FIRE”) position as he approached and entered the hallway.

Clearly, Officer Duncan should have moved the selector lever to the “SAFE” position before he knelt down and attempted to control or secure Stamps’ hands behind his back, but Duncan had not yet reached that point in his intended course of action when, by his account, he lost his balance, and the M4 discharged as he fell.

Whether or not the M4’s selector should be in the “SAFE” or the “SEMI” (“FIRE”) position when doing a tactical team entry is a matter on which authorities differ. While some trainers, including myself, recommend that the safety be kept in the “SAFE” position until the rifle is on target and the decision to fire has been made, there are many reputable law enforcement agencies, tactical teams, instructors and authorities who differ on this point.

For example, John Farnam, a well-known firearms instructor and author who trains police nationwide, takes the position that whether or not the selector lever of an M4 should be on “SAFE” or on “FIRE” is a matter of officer discretion when the officer has the rifle in his hands in a tactical situation. John Farnam espoused this position to a group of law enforcement instructors at least as recently as earlier this year, at the 2016 Conference of the International Law Enforcement Educators & Trainers Association (“ILEETA”) in Chicago. The U.S. Marshal Service, while recommended that the selector lever

be on "SAFE," similarly leaves this decision to the discretion of the individual officer. The Orlando Police Department SWAT Team also leaves the matter to the officer's discretion. The Chattanooga Police Department SWAT Team training is that officers should have their selectors in the "Fire" (or "SEMI") position on an entry. Chief Mike Williams, retired from the Chattanooga Police Department after 36 years of police service, including 25 years as a SWAT operator and SWAT Team Commander, reports that few, if any, tactical teams in his part of the country would have the M4 or AR-15 selector lever in the "SAFE" position on an entry. The Palm Bay (Florida) Police Department SWAT Team leaves the position of the M4 or AR-15 selector to the discretion of the officer if he has the weapon in a shouldered ready position.

Mike Conti, mentioned above, states that M4/AR-15 selector position for the Massachusetts State Police STOP Team (Special Tactical Operations Team) was left to officer discretion, at least through 2010 when he retired from the MSP.

Prominent firearms instructor Phil Singleton, a veteran of the British SAS who then ran H&K's International Training Division headquartered in Virginia for seven years, and now directs Singleton International, teaches that the M4/AR-15 selector lever should be in the "FIRE" position when conducting an entry such as was involved in this incident. Singleton has trained literally thousands of tactical teams, SWAT operators, federal agents and police officers throughout the United States over the past 25-plus years.

At least two of the Regional Tactical Teams for Montgomery County, Pennsylvania (a county bordering Philadelphia) train and perform their warrant entries with the selector levers of their M4 or AR-15 rifles in the "FIRE" position.

The written materials for the New Jersey Division of Criminal Justice "Assault Rifle Instructor Course" state, on page 66 in the section on the "Ready Position": "The safety select lever should be in the desired fire mode (depending on departmental policy)... If the shooter chooses to keep the safety select lever "on Safe" the master grip should be loosened and the firing hand thumb should be buried on top of the safety select lever for rapid manipulation." Clearly, both the "SAFE" and "FIRE" positions of the selector lever are presented in the NJDCJ materials as acceptable options for the agency or officer.

Tactical team authority Bret Pagnucco strongly advocates that the selector lever of the M4/AR-15 should be in the "FIRE" position during an entry. Pagnucco, retired as a tactical team officer from the Edmonton (Canada) Police Service, is now the Provincial Firearms Training Coordinator for the Province of Alberta, Canada. He is also the Firearms Section Chair for the National Tactical Officers Association ("NTOA"), the largest and most authoritative tactical team organization in the United States, and the one to which most U.S. SWAT Teams look for training standards. Pagnucco comments that in addition to Edmonton, virtually all other tactical teams in Canada, and many he knows in the U.S. as well, operate with the M4's selector lever in a "FIRE" position when performing tactical entries.

Finally, I note a survey on the issue of "safety on or safety off" that Steven Ijames conducted in his evaluation of this case. Ijames had a 30-plus year career with the Springfield (Missouri) Police Department, retiring as Assistant Chief, after which he accepted a job as Chief of Police of another agency. He spent many years commanding the Springfield PD's SWAT Team, participating in, supervising or commanding the service of approximately 3,000 search warrants, and helping to resolve over 150 barricaded subject incidents and seven hostage scenarios. He is a recognized authority and published

author on tactical team issues, and has authored the International Association of Chiefs of Police (“IACP”) model policies on TASER, less lethal force, chemical agents, diversionary devices, hostage rescue, and barricaded subjects, and their Concept and Issues Papers on SWAT and on police rifle use. He has been a lead instructor for the IACP, and CATO, and involved in NTOA tactical team training. In his evaluation of the Framingham case, James conducted a March 2011 survey of 703 police officers/agencies, specifically asking how their agency policy or training addressed long gun safety status during building clearing. The options offered to the survey recipients, and the breakdown of responses, were as follows:

1. On safe until firing – 277 responses (39.4%)
2. Off safe when clearing – 59 responses (8.4%)
3. Off safe when clearing, then on safe when performing a task that requires removing a hand(s) from the weapon – 260 responses (37%)
4. Officer preference – 107 responses (15.2%)

The above results, obtained close to the time of this incident, show that no consensus existed as to whether the safety of Officer Duncan’s M4 should have been on “Safe” or on “Fire” at the time of this incident.

**Reconstruction at the Shooting Scene.** The autopsy indicates that the bullet from Officer Duncan’s M4 carbine entered the deceased’s left cheek at about the level of the upper lip, traveling downward and rearward, and exiting the skin overlying the left mandible. The bullet then re-entered at the base of the left just above the left clavicle, fracturing the clavicle. Bullet fragments perforated the pericardial sac, the left ventricle of the heart, the upper lobe of the left lung, the aortic arch, and the pulmonary artery. The path of the bullet, in anatomical direction, was from right to left, downward, and from front to back. The autopsy report and autopsy photographs indicate a roughly oval stippling pattern on the left side of the deceased’s face, measuring some three inches wide by five and one-half inches high.

The barrel length of Officer Duncan’s M4 carbine is 11-1/2 inches. Although, depending on the type of rifle, caliber, barrel length, muzzle attachments if any, and type of ammunition used, stippling from rifles can occur to distances as great as 36 inches or more from the muzzle, based on my experience with AR-15, M16 and M4 rifles with barrels ranging from 20” to under 10”, the stippling pattern displayed on the deceased’s face was far too small and concentrated (dense) to have occurred within the range of 24-36 inches. Dr. Di Maio’s estimate of “12-18 inches, closer to 12 than 18 inches,” is consistent with my experience in this regard, and it is my opinion that the muzzle-to-skin distance in this case was as Dr. Di Maio has estimated.

At his deposition, Sgt. Stuart testified that he entered the kitchen seconds after hearing the shot, and that he first saw Officer Duncan in the corner of the hallway (which he marked with the red letters “X” and “D” on Exhibit 45) into which Officer Duncan demonstrated to me he came to rest after he lost his balance and fell rearward and to his left. Sgt. Stuart testified “I stood right over [Duncan] in this doorway here and I asked him if he were okay .. I got Duncan up and transferred him ...” (See Stuart Deposition at pgs. 51-53). Sgt. Stuart’s deposition is consistent with his interview following the incident, in which he stated that when he entered the kitchen after hearing the shot, “I looked over to the small hallway ... and I observed two people laying on the ground, one of whom was Officer Duncan. He was sitting against the wall with his feet out crossing the hallway.” (Stuart Interview, pgs. 10-11). Sgt.

Stuart's interview and testimony are both consistent with Officer Duncan's testimony that his rifle discharged when he fell in the hallway.

Based on my reconstruction of the shot at the incident scene on June 17, 2016, making use of Officer Duncan, the actual incident M4 carbine and sling, and an individual (Alexi Kesten) lying on the floor who is close in height to the height of the deceased, I was able to reproduce the unintentional shot Officer Duncan has described, lined up with the approximate wound path through the deceased's body. The wound path is consistent with a shot having been fired by Officer Duncan, who is 5'10" tall, when Duncan was falling or had fallen to the ground. The wound path is not consistent with a shot fired by Officer Duncan when he is standing on his feet, even with his knees and waist bent to a degree common in moving forward with an M4 in a situation such as this.

Vincent J.M. Di Maio, M.D., a leading forensic pathologist and the author of the foremost text on gunshot wounds, has opined that the deceased's gunshot wound, and the pattern of powder stippling on the deceased's face, are consistent with Mr. Stamps being prone, looking at Officer Duncan's gun,

... with his chin slightly lowered and his head rotated slightly to his right. This would account for the bullet traveling downward and backward. If Officer Duncan had been standing at the time the gun discharged, Mr. Stamps would have had to be looking up at the gun. The trajectory of the bullet would then have been toward the front of the body, not the back.

My reconstruction at the scene was in agreement with Dr. Di Maio's opinion and explanation, and with Officer Duncan's account of what occurred. If Officer Duncan had been fully on his feet, rather than falling or fallen, only a contortion of Mr. Stamps' body, or a complete repositioning of Duncan and Stamps, could have resulted in the front-to-back wound path that the autopsy indicated.

**The Opinions of Plaintiff's Experts.** I note that the color "images" (artistic renderings) provided by the plaintiff's expert James Gannalo in support of plaintiff's theory show Officer Duncan not in the hallway at all, but rather in the kitchen, that Mr. Stamps is closer to the kitchen doorway than Officer Duncan has testified he was, that Stamps' entire upper torso is raised up off the floor, and that Stamps' hands are neither over his head nor near his head as Officer Duncan has stated, but are well below Stamps' head, and closer to his shoulders. The images are thus in disagreement with numerous details not only of Officer Duncan's testimony, but details provided in Mr. Gannalo's report as well. In addition, it is questionable whether plaintiff's color images result in the wound path through the deceased's body that the autopsy indicates, but I will defer to Dr. Di Maio on this point. I also note that the M4's muzzle in some of the color "images" is much further from Mr. Stamps' face than would produce the relatively small, very concentrated stippling pattern observed and photographed at autopsy.

I also note that, if the incident occurred as shown in the Gannalo color "images," Mr. Gannalo provides no explanation whatsoever as to how or why Officer Duncan would have fired his rifle. Although on page 15 of his report Mr. Gannalo discusses the phenomenon of involuntary muscular contraction, he doesn't offer any opinion as to whether the discharge of Officer Duncan's rifle occurred as a result of this phenomenon, whether through a loss of balance, being startled, or due to an interlimb interaction. If Officer Duncan was not in the narrow, dark, cluttered hallway, trying to step around Mr. Stamps, as Duncan has testified, Mr. Gannalo offers no theory as to how Officer Duncan, a trained SWAT operator, could trip or lose his balance while walking across the open, well-illuminated, uncluttered

kitchen floor as shown in Gannalo's color "images," and no other explanation of how or why Officer Duncan would have fired his rifle.

Mr. Gannalo's conjecture is also in conflict with Officer Riley's statement that after he heard the shot, "So I look and I see Officer Duncan basically getting up ... but you could definitely tell he was getting his foot back under him and getting back up." Mr. Gannalo's conjecture is also in conflict with the statement of Sgt. Stuart to the effect that he first saw Officer Duncan, just seconds after the shot, in the inside left corner of the hallway [into which I note Officer Duncan has stated he fell], that he "stood right over" Duncan there, and that he "got Duncan up" off the floor (see Stuart Deposition at pgs. 51-53). Sgt. Stuart's deposition testimony is consistent with his interview following the incident, in which he stated that when he entered the kitchen after hearing the shot, "I looked over to the small hallway ... and I observed two people laying on the ground, one of whom was Officer Duncan. He was sitting against the wall with his feet out crossing the hallway." (Stuart Interview, pgs. 10-11). Sgt. Stuart's interview and testimony are both consistent with Officer Duncan's testimony that his rifle discharged when he fell in the hallway.

On page 13 of his report, Mr. Gannalo discusses the so-called "wound path trajectory" of Officer Duncan's shot through the deceased's body. In fact, the bullet's "trajectory," which is its path through the air, and its wound path, which is its path through the body, are two distinctly different things.

Mr. Gannalo appears not to understand the difference. In addition, on pages 47-53 of his deposition, Mr. Gannalo provides incorrect information about the supposed difference between "stippling" and powder "tattooing," explaining (incorrectly) that stippling can be washed off, while tattooing cannot. Mr. Gannalo's agreement and opinion that the small, very dense stippling pattern observed on the deceased's face could have occurred at a range of up to three feet (3') from muzzle to skin is, in my opinion, incorrect, as discussed in several other parts of this report.

I also note that the fired, ejected cartridge case from Officer Duncan's M4 rifle was recovered in the hallway, covered with blood, where Mr. Stamps was lying, not in the kitchen. I find it surprising that Mr. Gannalo makes no mention whatsoever of this piece of evidence, either in his expert report or in his deposition.

Plaintiff's expert Kim Widup asserts in his report that Officer Duncan had his finger on the trigger of the M4. Mr. Widup makes the same assertion in his deposition. Thus, he testified, "He [Duncan] would have pulled the trigger with his finger being on the trigger to begin with." (See Widup Deposition at pages 31-33.) Mr. Widup thus not only denies Officer Duncan's testimony that his finger was outside the trigger guard before he fell, but also the possibility that, if an involuntary muscular contraction occurred, Duncan's finger could contract into the trigger guard and fire the M4.

Mr. Widup also states on page 8 of his report, "Additionally, it is customarily taught that weapons are to remain "on safe" until ready to fire. The FPD police and SWAT training and policies existing at the time of the Stamps shooting failed to include this normal and accepted protocol in the law enforcement community." As discussed at length above, there is a split of authority in the law enforcement tactical community about whether the M4 selector should be on "SAFE" or on "FIRE" during a tactical entry such as this. Accordingly, I disagree with Mr. Widup's position on this point.

I also note that, even by Mr. Widup's own language, the M4 selector should remain "on safe' until ready to fire" (see Widup report at page 8, emphasis added). Officer Duncan had his M4 in a



shouldered "low ready" position, a position used so that he would be "ready to fire" if necessary when clearing the rooms of the apartment, and when approaching Mr. Stamps. While, admittedly, "ready to fire" involves some ambiguity, it is not the same as "having decided to fire" or "intending to fire" or "engaged in firing," all of which indicate not just that the officer is "ready" (prepared) to fire, but that he is either actually engaged in firing, or will be firing momentarily. Thus, even by the language selected by Mr. Widup, Officer Duncan's having the selector on "SEMI" was appropriate.

I disagree with Mr. Widup's position that Officer Duncan's actions were improper because (as Mr. Widup asserts) Mr. Stamps "posed no threat" to the officers. The perfect vision of 20/20 hindsight is not the appropriate way to evaluate the use of force by police. Instead, an officer's use of force should be judged by what is objectively reasonable based on what was known or reasonably believed by the officer at the time, and by what a "reasonable officer on the scene" would do under the same totality of the circumstances, not by what was later determined to be the case,. See Graham v. Connor, 490 U.S. 386 (1989). The fact that Mr. Stamps was not known to carry weapons, or had no prior violent criminal history, was not attempting to flee the police, and complied with the orders of the police, given at gunpoint, to get down on the floor, does not mean the officers serving the warrant in this apartment where Mr. Stamps resided and from which there was probable cause to believe cocaine was being sold should not have treated Stamps as potentially armed and dangerous until they were able to confirm the contrary. Among other things, this is why the other officers ordered Stamps to go prone on the floor. See, e.g., "The +1 Rule for Weapons Searches Revisited," by Dave Smith, PoliceOne.com, September 2, 2001. It has often happened that someone who fatally attacks police (1) has no prior criminal record, (2) is not be known by the police to carry weapons, (3) is not be known to the police on scene to be engaged in criminal activity, (4) is not fleeing the police prior to attacking them, and (5) is complying with the directions of the police prior to attacking them. Police are well aware of many situations in which a relative or friend of the suspect they are arresting uses force against the police in an attempt to prevent the arrest from being effected. Proper and fully appropriate procedure in a situation such as this would be to require Mr. Stamps to get down on the floor and, as soon as feasible thereafter, handcuff him and search him for weapons. FPD's training as provided to Officer Duncan was that he should have the M4's selector on "FIRE" ("SEMI") if he "perceived a possible threat." Certainly, any adult male in a drug house such as this, under these circumstances, is a possible threat until secured, searched, and proven to be otherwise. It was reasonable for Officer Duncan to perceive Mr. Stamps as a possible threat because, during a police raid of a suspected cocaine-dealing apartment in which Stamps lived, Duncan knew (1) Stamps had not yet been searched for weapons, (2) his hands were not yet secured, and (3) he was lying in a dark hallway with many bins and objects within his reach. By FPD policy, it was therefore appropriate for Officer Duncan to have his M4 selector in the "FIRE" position prior to moving his M4 out of the ready position and kneeling down to secure Mr. Stamps' hands behind his back.

I also disagree with Mr. Widup's opinion that Eurie Stamps posed no threat because, as Mr. Widup stated at his deposition, "... if his [Stamps'] hands don't move, there's no way that he can grab a weapon." (Widup Deposition, p. 26.) Contrary to Mr. Widup's truism is the tactical principle, almost universally taught to law enforcement officers nationwide, that "action beats reaction." As applied to this incident, it means that if Mr. Stamps had made a sudden reach for a weapon concealed on his body or secreted nearby, he might well have gotten off one or more shots before Officer Duncan could react and fire. See generally, In Defense of Self and Others ..., U. Patrick (FBI, ret.) and J. Hall (FBI, ret.), pages 101-110 "Action vs. Reaction." Cf., "The Speed of a Prone Subject," Lewinski, W.J., Seefeldt, D.A., Redmann, C., Gonin, M., Sargent, S., Dysterheft, J. and Theim, P., Law Enforcement Executive Forum (March 2016). And see "Subject Motion" videos on Force Science Institute website,

[www.forcescience.org](http://www.forcescience.org). Considering, in addition, the fact that the majority of shots fired by police in confrontations miss the attacker altogether, and many of those few shots that hit the attacker fail to produce immediate incapacitation, it is objectively reasonable for a police officer to view an unsearched subject whose hands are not restrained as a potential threat in a situation such as this.

The proper standard for evaluation here is not whether Mr. Widup, who wasn't present during the execution of the warrant, says he would or would not have perceived Mr. Stamps as a possible threat had he been there. The proper standard is whether Officer Duncan, who was there, was reasonable in perceiving Mr. Stamps as a possible threat. In my opinion, that inquiry needs to be answered in favor of Officer Duncan, as his perception of Mr. Stamps as a possible threat was certainly not an unreasonable perception, prior to Mr. Stamps being secured and searched for weapons. In fact, in his Internal Affairs report, Lt. Hill stated:

"Duncan articulated valid reasons for him to consider Stamps to be a potential threat."

With regard to Mr. Wildup's argument that the FPD taught the "contact/cover" principle, and that Officer Duncan should have used this tactic when he approached Mr. Stamps, it is my opinion that "contact/cover" is a tactic, not a mandate. Many police academies and law enforcement agencies teach the "contact/cover" principle, but like other tactics, it is ultimately a matter of officer discretion whether or not to use it, and how to use it, in any given situation.

Plaintiff's expert James Gannalo asserts in his report that Officer Duncan violated the rules of firearms safety by having his finger inside the rifle's trigger guard and allowing the rifle's muzzle to point at Mr. Stamps. While I am a very strong proponent of firearms safety, I must disagree with Mr. Gannalo's opinions on this topic. As discussed at length above, the involuntary muscular contraction of the hand during a loss of balance is neither volitional, nor can it effectively be willed not to occur when one falls unexpectedly. If Officer Duncan's finger entered the trigger guard in this manner when he fell, it was an involuntary and thus unavoidable "violation" of the firearms safety rules for which no officer should be blamed under these circumstances. Secondly, when one falls, it is often difficult, if not impossible, to control the direction of the gun's muzzle. While hunter safety classes teach several ways of carrying a hunting rifle or shotgun as a means of trying to control the direction of the muzzle in the event the hunter loses his footing and falls, this situation is very different. Given the tactical necessities of the situation, it was reasonable for Officer Duncan to want to keep the M4 in a shouldered ready position, as he did, and pointed toward Mr. Stamps, rather than having the M4 cradled in the crook of his arm, or in a "port arms" carry across his chest, or over his shoulder with the muzzle to the rear, or in one of the other modes of carry that may be appropriate for hunters. As with the muscular contraction of the hand, if Officer Duncan lost his balance and fell as he has described, his pointing of the M4's muzzle in an unsafe direction could have been involuntary and unavoidable.

Plaintiff's forensic pathologist, Barbara C. Wolf, M.D., appears to misunderstand the direction in which Officer Duncan fell in the hallway. Thus, on page 4 of Dr. Wolf's report, she states, "[Officer Duncan] heard the discharge of a firearms, which he later learned to be his rifle, during the interval between when he first started to fall, and when he impacted the wall to his right of where Mr. Stamps was laying." To the contrary, Officer Duncan fell backwards and to his (Duncan's) left, not to his right, and he impacted the wall to his (Duncan's) left, not to his (Duncan's) right, of where Mr. Stamps was laying. Given that Dr. Wolf's opinion that the wound path through the deceased's body could not have occurred as Officer Duncan has testified is based on her understanding of the position of Officer Duncan relative to the position of Mr. Stamps, this error is critical.

While Dr. Wolf says that, based on the stippling pattern noted and photographed at autopsy, she cannot state the distance from the M4's muzzle to Mr. Stamps' face without laboratory testing, she nevertheless roughly approximates the distance as two to three feet (see Wolf Deposition at page 31). As indicated above, I believe Dr. Wolf has greatly overestimated the distance, which I believe is closer to one foot than to two, and nowhere near three feet. This, also, is significant in an analysis of whether or not the shot is consistent with Officer Duncan's account of what occurred.

Finally I note, both with regard to the opinion of Dr. Wolf and that of James Gannalo, that there is not just one single, unique location and posture of Officer Duncan and Mr. Stamps that is the only way in which the shot could have been fired in order to produce the wound path noted at autopsy. To the contrary, because Officer Duncan, his rifle, and Mr. Stamps could each assume a range of positions, there are, as a result, many combinations of these three important components that would produce the observed wound path. The number of possible combinations is, however, significantly limited by some factors that are not widely variable, such as the muzzle-to-skin distance that will produce the observed stippling pattern, the accepted fact that Mr. Stamps was lying on the floor in the hallway, rather than in some other location, and the wound path through the deceased's body. These limiting factors allow me to state with assurance that the Officer Duncan's account of what occurred is consistent with the physical evidence in this case.

**Conclusion.** For the foregoing reasons, it is my opinion, to a reasonable degree of professional certainty in my fields of expertise, that:

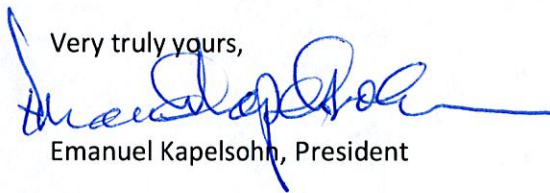
- The evidence in this case is consistent with the shot fired by Officer Duncan having occurred as Officer Duncan has described and testified, specifically, as an unintentional discharge resulting when he lost his balance.
- Loss of balance is one of several stimuli which are known to cause an involuntary muscular contraction of the hand, capable of resulting in the unintentional discharge of a firearm held in the hand.
- Even if, prior to his loss of balance, Officer Duncan's trigger finger (index finger) was positioned outside the trigger guard, braced on the frame of the rifle as Duncan states, an involuntary muscular contraction of his hand during a loss of balance could result in his trigger finger entering the trigger guard and firing the rifle.
- If the rifle's selector lever had been in the "SAFE" position prior to his loss of balance, with his thumb positioned on top of the selector lever as is the accepted position for the thumb in such situations, an involuntary muscular contraction of the hand would also be likely to move the selector lever to the "FIRE" position, allowing the rifle to fire if the trigger were pulled. Thus, it cannot be said with any degree of certainty that, if the rifle's selector lever had been in the "Safe" position when Officer Duncan experienced a loss of balance, an unintentional discharge of the rifle would not have occurred.
- When an involuntary muscular contraction occurs from an unexpected loss of balance in a situation such as this, the contraction of the hand is not only involuntary, but is unavoidable by the individual as well.
- Reputable law enforcement trainers, agencies, and authorities differ in their opinions as to whether the selector lever of an M4 carbine should be in the "SAFE" or in the "FIRE" position in a tactical situation such as this. Thus, it cannot be said that Officer Duncan's having the selector

lever of his M4 in the "FIRE" position was contrary to the accepted standard in the law enforcement field.

- For the same reason, it cannot be said that the training or policy of the Framingham Police Department's tactical team was contrary to the accepted standard in the law enforcement field in allowing a tactical team member to have the selector lever of his M4 carbine in the "FIRE" position when clearing rooms and/or when he "perceived a possible threat."
- The artist's renderings ("images") provided by plaintiff's expert, purporting to show the incident as plaintiff's expert opines that it occurred, do not accurately depict the incident, for the reasons discussed in detail in the above report.

I reserve the right to amend or supplement this report, and the opinions contained herein, if further information becomes available to me.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Emanuel Kapelsohn", with a long horizontal flourish extending to the right.

Emanuel Kapelsohn, President