

Fire/Arson Investigation Unit

Fire Investigation Report

INCIDENT # 19-41762

MAY 15, 2019



4541 Castaway Drive Tampa, Florida 33615

Hillsborough County Fire Rescue
9450 E. Columbus Drive
Tampa, Florida 33619
(813) 744-5541



**FIRE INVESTIGATOR J. CHABALOWSKI #1172****ABN #255210****NARRATIVE SUMMARY:**

On May 15, 2019 I Fire Investigator¹ J. Chabalowski was requested to investigate a structure fire with within Hillsborough County located at 4541 Castaway Drive Tampa, Florida 33615. Upon arrival I met and discussed the facts and circumstances of this fire with Hillsborough County Fire Rescue (HCFR) Fire Investigators Brett Vaughan #825, Paul Everett #1273 and Hillsborough County Sheriff's Office (HCSO) Detective C. Cutler ABN#204005.

Upon my arrival, three (3) fire fatalities were confirmed and located within the fire building, apartment of origin.

The State Fire Marshal's Office (SFMO) was contacted according to protocol and responded. SFMO Detectives M. Douglas, C. Precious and S. Charbonneau and assisted with this investigation.

The SFMO K9 unit also arrived on scene. Detective/K9 Handler J. Batz with K9 Booker conducted a scene examination to determine if accelerants were present within the scene. After examination it was reported no accelerants were detected within or around the involved dwelling.

See SFMO report 19-1325 for full details of their actions.

Bureau of Alcohol Tobacco and Firearms, (BATF) Special C. Anuszczyk arrived and assisted with the investigation.

Hillsborough County Sheriff's Office (HCSO) Deputy R. Thomas was on scene and originated HCSO report 19-337579. HCSO Detective C. Cutler #204005 arrived on scene to conduct the death investigation. HCSO Crime Scene Technician N. Hagar #4857 arrived and photographed the scene. See HCSO report 19-337579 for full details of their actions.

¹ An individual who has demonstrated the skills and knowledge necessary to conduct, coordinate, and complete a fire investigation. NFPA 1033, *Standard for Professional Qualifications for Fire Investigator* (2014 Edition) Chapter 3, *Definitions*, pg. 7, 3.3.7



American Medical Response (AMR) Medical Technicians Plaisted and Gaudette operating MEO2 & 6 on behalf of the Hillsborough County Medical Examiner's Office (HCMEO) arrived to remove the victims from the scene and transport to the Medical Examiner's Office for autopsy. See HCMEO reports 19-3852-M, #19-3853 and 19-3854 for further details and autopsy findings.

The autopsies were performed by Doctor Devers of the HCMEO office on May 16, 2019 at approximately 0930hrs. They were attended by SFMO Detectives Precious, Charbonneau and myself.

SITE DESCRIPTION:

The siteⁱ of the fire was a multifamily residential neighborhood. Castaway Drive is the west side of a residential apartment complex loop driveway. Castaway Drive runs north from Diodora Way (Diodora runs east/west) and intersects with Club Captiva Drive. Club Captiva Drive runs north from Memorial Highway. The fire occurred in a two-story multifamily residential apartment complex constructed of ordinary type III unprotected block construction. The roof system was of lightweight wooden truss construction with an asphalt shingle roof covering. The structure involved possessed the physical addresses of 4541 (apartments 1-4) and 4539 (apartments 1-4). The apartments of 4541 Castaway Drive, which was on the north half of the structure, contained the greatest amount of damage, more specifically the top floor involving apartment #3 and #4. The involved structure was located on the east side of Castaway Drive and faced west. The structure sustained severe fire, heat, water, and smoke damage. The structure was occupied at the time of the fire. The structure was secured at the time of the fire with no sign of forced entry to any apartment. The structure did have electrical utilities at the time of the fire.

Before the investigation, I conducted a site safety and security assessment. After the removal of several bottom chords of the roof truss system over the living room/kitchen area of apartment #3, I determined it was safe and the investigation proceeded.

The crew of HCFR E20 safely removed the ceiling hazard but not before photographing the interior of this area, prior to removal.



HCSO deputies cordoned the secured area with scene tape and started a scene log.

See HCSO supplemental report for details of the crime scene log.

WEATHER:

Conditions were clear and ~ 68° F with little to no wind. No lightning was reported in the area preceding the incident. I determined the weather did not play a role in this fire.

SCENE EXAMINATION²:

I utilized the scientific method³ as the operating analytical process throughout the fire investigation and for the drawing of conclusions per National Fire Protection Association 1033 *Standard for Professional Qualifications for Fire Investigator* 2014 Edition (NFPA 1033). I identified and secured the investigation scene⁴. I used a systematic approach to this fire investigation evaluating from exterior to interior then from least damaged to most damaged area(s). I began first by working to establish the area(s) of origin.

EXTERIOR:

I began my scene investigation by examining the exterior of the structure in a counter clockwise direction⁵. The entire structure was heavily damaged by fire. I began my examination at the west side of the structure located at 4541 Castaway Drive. I noted heavy fire damage to the entire upper

² Duties shall include inspecting and evaluating the fire scene, or evidence of the scene, and /or conducting a comprehensive review of documentation generated during the examination(s) of the scene if the scene is no longer available, so as to determine the area or point of origin, source of ignition, material(s) ignited, and act or activity that brought the ignition source and materials together and to assess the subsequent progression, extinguishment, and containment of the fire. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 7, 4.2

³ The fire investigator shall employ all elements of the scientific method as the operating analytical process throughout the investigation and for the drawing of conclusions. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 7, 4.1.2

⁴ Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and all evidence or potential evidence is protected from damage or destruction. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 7, 4.2.1

⁵ Conduct an exterior survey, given standard equipment and tools, so that evidence is identified and preserved, fire damage is interpreted, hazards are identified to avoid injuries, accessibility to the property is determined, and all potential means of egress and ingress are discovered. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.2



half of the building. The fire damage and ventilation consumed most of the roof system and covering, leaving some remnants of vertical support beams. The fire damage extended around the rear of the structure, with heavy fire damage present on the screen lanais of the two top floor apartments. The only area of roof coverage still intact was on the southern half of the entire structure which incorporates both 4541 and 4539 Castaway Drive. The heaviest damage was centered over apartment #3, the northern most, top floor apartment.

The fire burned from north to south across this building, leaving approximately one half of the roof system intact. I observed heavy fire damage to the structure from three sides. The north end gable remained standing but eventually collapsed during suppression efforts. The rear patios of the second-floor apartments #3 and #4 were significantly damaged by the fire. The patios were noted to share a common wall which had been consumed by the fire effects. The eaves above both patios were also observed to be missing due to the fire. As previously described, the roof above apartments 3 & 4 on the second floor had been consumed during the fire. Fire effects on the wall immediately west of the patio of apartment 3, indicate the fire escaped the patio and moved vertically until entering the attic space.

In the center of the structure's east side, the electric service was located which supplied the apartments of both addresses. The equipment was new and undamaged. The external compressors for the air conditioning were also observed to be undamaged. Cable and telephone boxes were located in close proximity of the electrical equipment and displayed no fire damage.





HCFR Engine 7 (E7) Captain G. Lewis reported 4541 Castaway Drive was fully involved on the top floor with heavy smoke and flames showing from his north/west side vantage point upon arrival. He reported heavy flame involvement hampered entry into apartment #3, forcing the crew to initially fight the fire from the front door.

During fire suppression/search and overhaul activities three deceased victims were discovered inside the master bathroom of apartment #3. The victims were found on the floor of the master bathroom and just outside the bathroom threshold.

All fire intensity patterns and tracking indicate the fire originated within apartment #3.



INTERIOR:

I began my interior investigation of 4541 Castaway Drive by entering through the front/west door⁶. into second floor apartment #3. The entrance led into the interior of the home via the living room and open floor plan kitchen. I surveyed the fire damage analyzing intensity patterns and building materials⁷. I followed burn damage from the least burned area to the most severely damaged area. Upon entering the front door, I noted heavy smoke, heat, fire and water damage within the entire apartment. I noted the heaviest damage to the roof truss system which was mostly gone, consumed entirely by fire effects.

I proceeded north toward the area of the home containing the master bedroom and master bathroom, two additional bedrooms and one additional bathroom. The complete area showed heavy smoke, heat, fire and water damage throughout, however; the clothes, furniture and padding to the mattress were partially intact in the two west side bedrooms. All fire intensity patterns observed indicated the fire originated from outside of these bedrooms/bath areas. Damage was primarily uniform throughout, consuming the entire roof system over the apartment with most of the walls damaged to the floor level in nearly every room as well as damage to the contents.



⁶ Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved, the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.3

⁷ Interpret fire patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved and in context and relationship with all patterns observed and the mechanism of heat transfer that led to the formation of the pattern. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.4



In the master bathroom, at the north end of the apartment, I located three (3) deceased victims. I observed the master bathroom as split between the bath and toilet inside a separate room. The sink was in the closet/dressing area. In order to reach the bathroom toilet, one would have to pass through the dressing area first. I observed ceiling debris covering most of the floor and what remained of the furniture. Upon entering the dressing area of the master bath, I observed the young male victim, lying on his left side, against the north wall. His head was positioned vertically against the door jamb. I noted his body did show minor thermal fire effects and heavy soot accumulation. Adjacent to the male, inside the small bath/toilet room, I observed the young female victim supine with her feet against the toilet and head on the threshold of the doorway. She was draped across the legs of an older female victim. The adult female victim was inside the bathroom, kneeling against the tub. Her body was bent over with her upper torso, upper extremities and head in the tub full of water. Both female victims showed signs of thermal fire effects.

I observed heavy char and mass loss of ceiling, roofing and truss materials above the area. I noted increased wall board and paint intact closer to the floor. I observed aluminum blinds on the master bedroom window sill melted down onto the lower sill.





I then proceeded back into the main portion of the home toward the east side living room and lanai. The wooden roof support members and bottom chords above this area were completely burned away. I also noted saddle burn patterns on the top half of the support beam from the header boards and lintel supporting the slider doors.

Upon approaching the lanai, I observed heavy fire effects and damage. The damage increased at the lanai entrance into the apartment. The fire patterns showed increased mass loss, heavy char and increased damage from fire effects on the lanai and over the top of the wall sill where it meets the roof system.



All fire intensity patterns found in the structure indicated the fire originated on the lanai. Intensity patterns found also indicated the fire spread from the lanai into the apartment via the roof and truss system, then progressed towards the west and north into the kitchen, living room and bedroom areas.

I then concentrated the investigation to the lanai. This area was identified as the area of origin, after following burn patterns and intensity indicators back to this particular area.



I began the process of layering, removing, and examined fire debris from the area of origin⁸. I noted any target fuels and potential ignition sources. Within the area of origin, I removed charred wood frame members from the roof and wall supports of the structure, ceiling materials and glass. Slider door glass was found directly outside the doorway, on the lanai, shattering towards the fire indicating the slider was closed at the time of the fire. I located and identified a GFCI receptacle to the left of the slider door. The damage was extensive, however; it did not appear to have anything plugged into it at the time of the fire. Further analysis would be required to prove/disprove this observation. I located an artificial Christmas tree and a stanchion lamp adjacent to the receptacle, neither were found to be plugged in at the time of the fire after finding both plug blades for each item approximately 1 foot from the receptacle.



There was an overhead light fixture above this receptacle however the damage to the fixture was very severe and did not facilitate failure analysis.

⁸ Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, potential ignition source(s) is identified, and evidence is preserved without investigator-inflicted damage or contamination. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.6



I began the process of reconstruction of the area of origin⁹. Due to the heavy fire damage, the process was limited to a couch, magnesium/aluminum wheels (used as a makeshift table), a plastic tote, also used as table, the Christmas tree and lamp. The tote was found directly across from the glass slider, against the outer screen and vertical support of the lanai. The tote melted onto the painted concrete deck, preserving the paint underneath, suggesting this melted very early in the fire. The magnesium wheels were situated on the north end of the lanai, against the north wall and corner of the screen/outer wall. They suffered melting on only the southern exposure, suggesting the fire was south of these wheels. The couch was situated against the lanai's west wall, to the north of the glass slider. The couch upholstery was completely consumed with increased metal oxidation on the south and east side, suggesting it was exposed to more intense fire conditions in this area. All tracking indicators point to an area of origin being at or near the plastic tote. Melted into the top of the tote was a glass ashtray with a marijuana symbol on the bottom. This area is where the deceased woman would reportedly smoke cigarettes at all hours of the day and night.

See witness statements for more information regarding the smoking habits of the adult female victim.

⁹ Reconstruct the area of origin, given standard and, if needed, special equipment and tools as well as sufficient personnel, so that all protected areas and fire patterns are identified and correlated to contents or structural remains, items potentially critical to cause determination and photo documentation are returned to their pre-fire location, and the area(s) or point(s) of origin is discovered. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.7



After conducting my interior investigation, the victims were examined and photographed by HCSO Detectives, HCSO Crime Scene, the Hillsborough County Medical Examiner's Office and Fire Scene Investigators. The victims were removed by AMR personnel and transported to the HCMEO. The victims showed no signs of non-fire related trauma during this procedure. Clothing was taken from the victims into

evidence as well as fire debris samples for analysis and sent to the State of Florida Forensics Lab.

The victims were identified as:

Mother- Meralys Velasques (H/F) 02/16/1987

Daughter- Sophia Victoria Duque (H/F) 02/10/2009

Son- Ethan Julian Duque (H/M) 08/31/2013

*Identification was confirmed via HCSO Detectives and the HCMEO.

DOCUMENTATION:

I documented the fire scene by digital photographs at the time of this investigation with a Cannon G15 & G16 digital cameras. I also prepared field notes and a rough sketch to prepare this final report. A fire debris sample was collected from the floor of the lanai in the northwest corner, near



the couch. Clothing from the victims were also taken into evidence. All evidence was logged into the HCSO Evidence Control Section. The evidence samples were subsequently shipped to the State Fire and Arson Forensic Lab for analysis. See HCSO report #19-337579 for additional investigative details. See State Fire Marshal's report #19-1325.

INTERVIEWS:

Interviews were conducted and documented by HCSO at the time of the investigation. See report #19-337579 for full details.

CONCLUSION:

The fire originated in the middle of the lanai. Due to the extensive fire damage and uniformity of intensity patterns found within the area, I was unable to isolate the fire's singular ignition source cause or identify the first material ignited, however during the course of the investigation, interviews and evidence located in proximity, strong indicators would formulate the theory of poorly discarded smoking materials. This will remain inconclusive at this time. As a result of not being able to define the ignition matrix, I was unable to determine the fire's cause.

I noted no signs of incendiaryism.

Based on fire scene examination, physical evidence discovered, and supporting conditions, this fire has been classified as an undetermined fire.



Notes

¹ An individual who has demonstrated the skills and knowledge necessary to conduct, coordinate, and complete a fire investigation. NFPA 1033, *Standard for Professional Qualifications for Fire Investigator* (2014 Edition) Chapter 3, *Definitions*, pg. 7, 3.3.7

¹ The general physical location of the incident, including the scene and the surrounding area deemed significant to the process of the investigation and support areas. NFPA 921 *Guide for Fire and Explosion Investigations* (2017 Edition) Chapter 3, *Definitions*, pg. 18, 3.3.157

¹ Duties shall include inspecting and evaluating the fire scene, or evidence of the scene, and /or conducting a comprehensive review of documentation generated during the examination(s) of the scene if the scene is no longer available, so as to determine the area or point of origin, source of ignition, material(s) ignited, and act or activity that brought the ignition source and materials together and to assess the subsequent progression, extinguishment, and containment of the fire. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 7, 4.2

¹ The fire investigator shall employ all elements of the scientific method as the operating analytical process throughout the investigation and for the drawing of conclusions. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 7, 4.1.2

¹ Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and all evidence or potential evidence is protected from damage or destruction. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 7, 4.2.1

¹ The systematic approach recommended is based on the scientific method, which is used in the physical sciences. This method provides an organizational and analytical process that is desirable and necessary in a successful fire investigation. NFPA 921 *Guide for Fire and Explosion Investigations* (2017 Edition) Chapter 4, *Basic Methodology*, pg. 19, 4.2

¹ A structure, part of a structure, or general geographic location within a fire scene, in which the “*point of origin*” of a fire or explosion is reasonably believed to be located. NFPA 921 *Guide for Fire and Explosion Investigations* (2017 Edition) Chapter 3, *Definitions*, pg. 14, 3.3.11

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¹ Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved, the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.3

¹ Interpret fire patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved and in context and relationship with all patterns observed and the mechanism of heat transfer that led to the formation of the pattern. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.4

¹ Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, potential ignition source(s) is identified, and evidence is preserved without investigator-inflicted damage or contamination. NFPA 1033 *Standard for Professional Qualifications for Fire Investigators* (2014 Edition) Chapter 4, *Fire Investigator*, pg. 8, 4.2.6



References

NFPA 1033, *Standard for Professional Qualifications for Fire Investigator* (National Fire Protection Association 2014)

NFPA 921, *Guide for Fire and Explosion Investigations* (National Fire Protection Association 2014)

Weather Underground (n.d.) *Weather Underground/Historical Weather*. Retrieved from <http://www.wunderground.com/history/?MR=1>