

**LINE OF DUTY
DEATH REPORT
REPORT SLIDES**



F2021-13 PA

Career Firefighter Dies and Three Others Injured in a Struck-By Incident while On-Scene at a Roadway Crash



Summary

- On July 24, 2021, a career firefighter died in a vehicular struck-by crash while preparing to leave the scene of an earlier two-vehicle crash on a four-lane limited-access state roadway.
- In addition, two volunteer firefighters and a state police trooper were also struck and injured.
- The volunteer firefighters sustained critical injuries necessitating air medevac from the scene.
- The state police trooper sustained moderate injuries and was transported by ground ambulance.
- At 03:04, two fire companies (FC1 and FC2), emergency medical services (EMS), and state police were dispatched to the westbound lanes of a state roadway for a vehicle crash with injuries.



Summary

- The roadway consists of two lanes for each direction divided by a barrier wall, and each direction is bordered by a 12-foot shoulder.
- Dispatch reported that the crash involved two passenger vehicles (VEH-1 and VEH-2).
- At 03:07, FC1 responded with a heavy rescue (rescue, R) with six crew members, which consisted of a volunteer captain (R-CPT), a volunteer lieutenant (R-LT), a career firefighter driver/operator (R-CFF), a volunteer firefighter (R-FF1), and two junior volunteer firefighters (R-FF2 and R-FF3).
- Upon arrival at approximately 03:12, members of FC1 observed VEH-1 and VEH-2 on the roadway shoulder separated by approximately 100-feet.



Westbound view of roadway shown from alongside rescue displaying medical equipment and supplies on the roadway and shoulder with a police vehicle and involved civilian vehicles in the distance. Photo by Fire Marshal Office



Summary

- R-CFF positioned the rescue in the right travel lane with its front bumper beside the rear bumper of VEH-1.
- The R-CPT advised the county dispatch center of two vehicles on the right shoulder of the roadway separated by approximately 100-feet, with occupants outside of the vehicles.
- The rescue crew deployed five traffic cones.
- The cones were placed from the driver's side rear of the rescue to the white line along the roadway shoulder (fog line), 10- to 15-feet behind the rescue.
- Crew members then went to assess the occupants for injuries.
- FC2 responded with a rescue engine (engine, E), also at 03:07, and arrived on-scene at approximately 03:16.



Summary

- The engine positioned as a blocking vehicle immediately behind the deployed traffic cones, diagonally blocking the right travel lane and the shoulder of the roadway.
- This positioning of the vehicle allowed oncoming traffic to pass the initial crash scene using the left travel lane.
- The FC2 assistant chief (E-AC) disembarked and joined R-CPT.
- A state police vehicle then arrived on-scene with two troopers (TPR 1 and TPR 2).
- The police vehicle was positioned immediately in front of the rescue in the right travel lane.



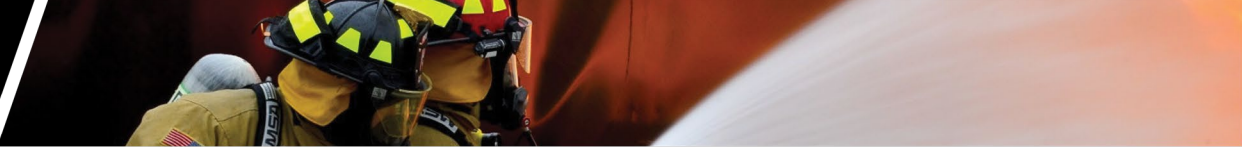
Summary

- The fire department guidance provides that the law enforcement agency who has jurisdiction of the roadway maintain responsibility of traffic crashes once on scene.
- After troopers arrived, FC1 members assessing the occupants reported to R-CPT that there were no injuries involved with the crash. R-CPT cancelled responding EMS.
- R-CPT provided a face-to-face summary report to both troopers and received orders from a trooper that FC1 and FC2 were released.
- R-CPT advised county dispatch that the rescue and engine were released and back in service.
- After stowing the traffic cones, R-CFF, R-FF1, R-FF2, and R-FF3 were talking while standing on the shoulder area next to the rescue. R-CPT, R-LT and E-AC were at the front of the rescue.



Summary

- R-CPT notified the engine that they were released.
- The engine merged into traffic in the left travel lane, proceeded forward, came to a stop near VEH 2 to briefly talk with TPR 1, and then pulled away while notifying county dispatch of being back in service.
- During this same time, a vehicle traveling westbound was observed by R-CPT approaching the crash scene in the right travel lane and then swerving onto the right shoulder.
- R-CPT yelled “RUN.”
- The vehicle was further observed passing by the rear of the rescue striking R-CFF, R-FF1, and R-FF2 standing within the right shoulder area and striking the rear of the first civilian vehicle and pushing it forward approximately 15-feet.



Summary

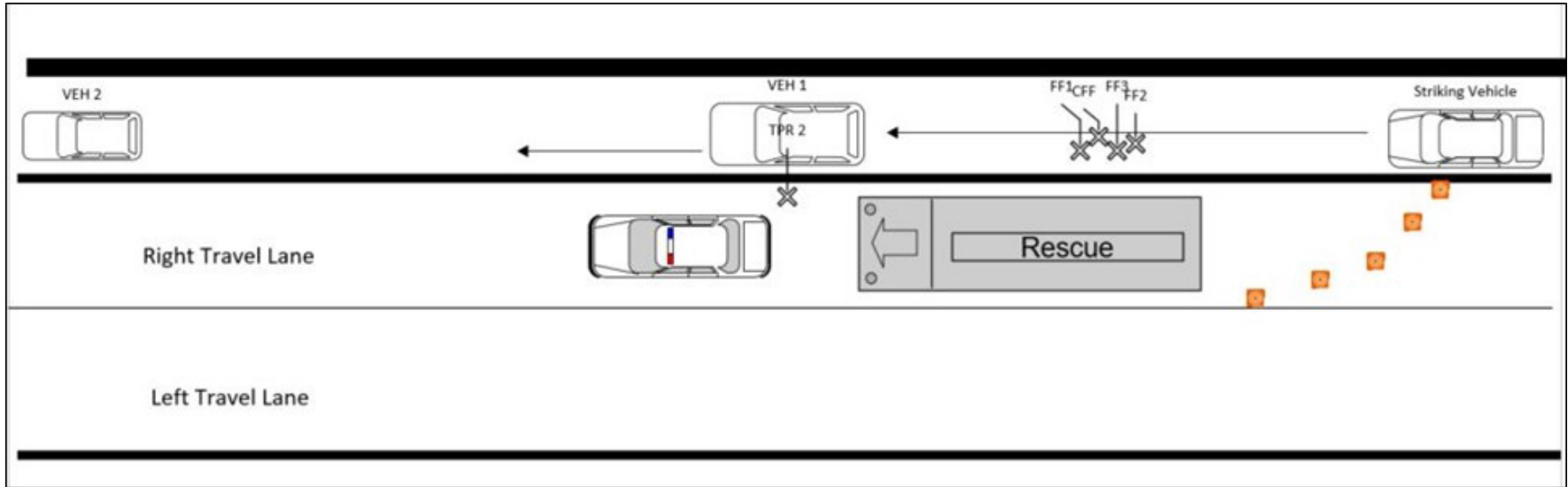


Diagram of vehicle and personnel location at the time of impact. Arrows show direction of vehicle movement during and after impact. Diagram by NIOSH.



Summary

- R-FF3 had jumped on to the shoulder barrier wall, holding on to avoid falling to the ravine below.
- TPR 2 sustained a secondary strike during this event.
- R-CPT immediately requested multiple EMS units to respond, while available crew began triage and initiated treatment based on severity of those struck.
- After hearing the R-CPT's message to county dispatch, the engine immediately stopped and proceeded to back-up, approximately one-tenth mile to the scene, and the crew assisted with medical care.
- R-CFF was located in front of the police vehicle, approximately twenty feet away from the impact area, in cardiac arrest.



Summary

- R-FF1 was located between the rescue and police vehicle with altered levels of consciousness and extremity trauma.
- The trunk and rear window of the police vehicle sustained damage that indicates R-FF1 initially impacted the police vehicle before landing on the roadway.
- R-FF2 was found unresponsive with head trauma against the barrier wall shoulder wall.
- TPR 2 was found along the passenger side of the police vehicle with extremity trauma from a secondary strike.
- Five EMS units and multiple fire companies responded to the scene.



Summary

- Cardiopulmonary resuscitation was provided to the R-CFF while on-scene and during transport by ground ambulance to the local emergency room where he later was pronounced deceased.
- Two medical helicopters were dispatched to transport R-FF1 and R-FF2 to an emergency room.
- TPR 2 was transported by ground ambulance to the local emergency room.



Contributing Factors

- Ineffective temporary traffic control in the following Temporary Traffic Control (TTC) zones:
 - Advance Warning Area
 - Transition Area
 - Activity Area
 - Termination Area
- Inadequate termination of a Traffic Incident Management Area (TIMA)
- Lack of continuous risk assessment
- Ineffective situational awareness
- Failure to require and provide traffic incident management training and ensure competencies
- Inadequate and ineffective department and company traffic incident management policy and company traffic incident management standard operating procedures for response to roadway incidents



Recommendations

- All emergency responders involved with incident command operations should ensure an appropriate TIMA is identified and effective TTC zones are implemented for traffic incidents.
- All emergency responders involved with incident command operations should ensure a proper and effective termination of a TIMA to maintain the safety of all responders through their departure from the scene.
- All emergency responders involved with incident command and fire officers should ensure ongoing risk assessments through the duration of the incident until all responders have departed the scene.



Summary

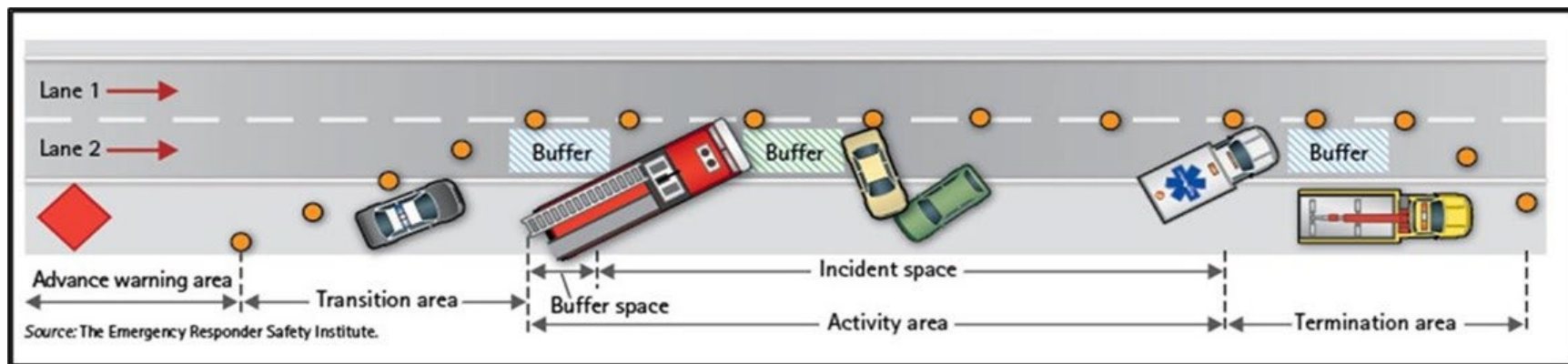


Diagram of a traffic incident management area with identified temporary traffic control zones.
Diagram by Emergency Responder Safety Institute



Recommendations

- All responders should develop comprehensive situational awareness through education, practice, and experience.
- A multidisciplinary approach for traffic incident management training should be required and provided to all potential responders for roadway incidents.
- Develop fire department-wide TIM policies, trainings, and SOPs that are further expanded by each fire company based on specific community needs.

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