

# STATE FIRE MARSHAL'S OFFICE

## Line of Duty Death Investigation



**Investigation Number 03-262-03**

**Lieutenant Charles Lance Mathew**  
**LaBelle-Fannett Volunteer Fire Department**  
March 18, 2003

Texas Department of Insurance  
Austin, Texas

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## Summary

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A 20 year-old volunteer fire lieutenant died when he was struck by a tractor-trailer truck at the scene of a traffic incident.

On March 18, 2003 at approximately 2:37 a.m., the LaBelle-Fannett Volunteer Fire Department (VFD) was notified by the Jefferson County Sheriff's Office of a traffic incident with minor injuries in the eastbound lane of Interstate 10 near milepost 833. Firefighters were alerted of the call via the radio paging system. The dispatcher realized the location of the call was in the Hamshire VFD's service area and she, in turn, notified that department. Hamshire VFD was sending a fire engine to the scene.

LaBelle-Fannett VFD Lieutenant Lance Mathew and firefighter George Dearborne responded directly to the incident scene in their personal vehicles while other firefighters and medics traveled to the fire station to pick up the ambulance.

Firefighter Dearborne arrived first, parked on the inside westbound shoulder of Interstate 10 directly across from the original incident, and walked across the median to the eastbound outside shoulder to assess the situation. Dearborne radioed LaBelle-Fannett Medic 6 to advise personnel on the ambulance that only one person had sustained hand injuries at the incident. A Hamshire VFD medic and a Sheriff's deputy were already on the scene. No fire or EMS apparatus had arrived at the scene.

Lieutenant Mathew arrived shortly after Dearborne at approximately 2:59 a.m. and parked his personal vehicle directly behind Dearborne's. Mathew alighted from his truck and walked across the grassy median toward the original incident.

The driver of an eastbound tractor-trailer truck saw Lieutenant Mathew step out into the eastbound lane of traffic directly in front of his truck. The driver of the tractor-trailer had no time to react and was unable to stop, and the right front part of the truck-tractor stuck Mathew.

Lieutenant Mathew was thrown by the impact to the grassy median approximately 170 feet east of the point of impact. Firefighter Dearborne and others on the scene checked Mathew, but he had sustained catastrophic injuries and was obviously deceased.

The local Justice of the Peace arrived at the scene and officially placed the time of the death of Lieutenant Mathew at 3:00 a.m. An autopsy was ordered. The Jefferson County Medical Examiner ruled Lieutenant Mathew died of severe craniocerebral injuries.

Lieutenant Charles Lance Mathew served in the LaBelle-Fannett Volunteer Fire Department for over two years. He is survived by his parents.

## **Introduction**

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The Texas State Fire Marshal's Office was notified of the death of LaBelle-Fannett VFD Lieutenant Lance Mathew on March 18, 2003. State Fire Marshal's Office (SFMO) Chief Inspector Richard L. Bishop was assigned as the lead investigator. Members of the SFMO LODD Benefits Task Force were immediately dispatched to provide assistance to the family of the victim and the fire department. Bishop traveled to LaBelle-Fannett VFD on March 25, 2003 to conduct an investigation of the incident.

Upon arrival, Bishop was advised that Charles Lance Mathew, a LaBelle-Fannett VFD Lieutenant, was at the scene of a motor vehicle incident when he was stuck and killed by a tractor-trailer. Mathew was pronounced dead at the scene. The Jefferson County Medical Examiner had conducted an autopsy.

The SFMO commenced an LODD investigation under the authority of Texas Government Code Section 417.0075. The statute requires SFMO to investigate the circumstances surrounding the death of the firefighter, including the cause and origin of the fire, the condition of the structure, and the suppression operation, to determine the factors that may have contributed to the death of the firefighter. The State Fire Marshal is required to coordinate the investigative efforts of local government officials and may enlist established fire service organizations and private entities to assist in the investigation.

The National Fallen Firefighter's Foundation and the National Institute for Occupational Safety and Health (NIOSH) Fire Fighter Fatality Investigation and Prevention Program were notified.

During his investigation, Bishop met with LaBelle-Fannett VFD Chief Charles Sonnier and firefighters that were at the incident. Trooper David Crawford of the Texas Department of Public Safety and Jefferson County Precinct Four Justice of the Peace Ray Chesson were contacted. Roadway information was gathered from the Texas Department of Transportation. The incident scene was photographed and diagrammed by the Department of Public Safety.

## **Origin and Cause Investigation**

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This incident did not involve a fire.

## **Building Structure and Systems**

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This incident did not involve any buildings.

## Investigation of the Death of the Firefighter

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On March 18, 2003 at approximately 2:37 a.m., the Jefferson County Sheriff's Office received a report of a traffic incident with minor injuries in the eastbound lane of Interstate 10 near milepost 833 and the Hamshire exit. The LaBelle-Fannett Volunteer Fire Department was notified by the Sheriff's Office and dispatched the call to firefighters via the radio paging system. The dispatcher realized the location of the call was in the Hamshire Volunteer Fire Department's service area and she in turn notified that department. Hamshire VFD requested mutual aid in the form of a LaBelle-Fannett VFD Emergency Medical Service (EMS) ambulance because Hamshire VFD was short on manpower. Hamshire VFD said they would be sending a fire engine to the scene.

While the LaBelle-Fannett VFD dispatcher was contacting Hamshire VFD, Lieutenant Lance Mathew was traveling to the fire station to pick up a fire engine to take to the scene. Firefighter George Dearborne responded directly to the incident scene in his personal vehicle. Captain Chris Byrd and other LaBelle-Fannett firefighters and paramedics were in route to the fire station to pick up a fire engine and ambulance.

Firefighter Michael Howard arrived at the fire station and started Medic 6 and pulled it out to await arrival of paramedics. Captain Byrd arrived at the fire station and heard the LaBelle-Fannett VFD dispatcher advise firefighters by radio that Hamshire VFD would be sending a fire engine to the scene. Captain Byrd heard Lieutenant Mathew on the radio saying he was diverting to go directly to the incident scene and observed him drive past the fire station in his personal vehicle with the emergency four-way flashers activated. At this time firefighter Howard left the fire station in his personal vehicle to proceed to the incident scene.

Heavy fog was present in the area of the fire station at the time of the call and Captain Byrd announced on the radio for all personnel to use caution. He heard Lieutenant Mathew acknowledge the fog warning over the radio, followed by firefighter Howard. He next heard firefighter Dearborne announce he had arrived at the scene of the incident east of the Hamshire exit.

Firefighter Dearborne parked on the inside westbound shoulder of Interstate 10 directly across from the original incident at approximately milepost 833.69 and walked across the highway to assess the situation. Dearborne's vehicle was approximately ¼ mile from the Hamshire exit ramp. Dearborne had turned his vehicle headlights off and left the four-way emergency flashers operating. Dearborne called his fire dispatcher on the department radio to advise all units that only one person had sustained hand injuries at the incident. LaBelle-Fannett VFD utilizes the Incident Command System, but Firefighter Dearborne did not announce he was taking command because the incident was in Hamshire VFD's area of responsibility.

A medic from Hamshire VFD had arrived before Dearborne and had parked her personal vehicle on the eastbound outside shoulder near the incident. Jefferson County Sheriff's Deputy James Lee, Jr. was on the scene and had parked his patrol car with its overhead emergency lights operating behind a parked tractor-trailer on the eastbound outside shoulder. Witnesses reported several wreckers parked near the eastbound Hamshire entrance ramp with their overhead warning lights flashing. No traffic control had been established and all vehicles involved in the original incident were parked on the shoulder or off the roadway.

Lieutenant Mathew arrived shortly after Dearborne at approximately 2:59 a.m., and he parked his personal vehicle directly behind Dearborne's, turning off the headlights and leaving the emergency flashers on. Mathew alighted from his dark grey truck and walked across the grassy median toward the original incident.

The driver of an eastbound tractor-trailer stated he heard CB radio traffic regarding an incident ahead and he moved to the inside lane and slowed to 48-50 miles per hour. The truck driver stated he saw emergency lights on the vehicles parked on the eastbound outside shoulder and saw other non-emergency vehicles parked on the inside westbound shoulder.

As he passed the incident scene, the truck driver checked his right mirror to see if he had cleared the scene and when he looked back to the front he saw Lieutenant Mathew step out into the eastbound lane of traffic. The driver of the tractor-trailer was unable to stop and struck Mathew with the right front part of the truck-tractor just to the left of the center divider line. The driver came to a controlled stop on the shoulder approximately 598 feet past the point of impact. There were no skid marks left during the stop.

Sheriff's deputy Lee and the tractor-trailer driver witnessed the impact. Firefighter Dearborne said he saw the silhouette of Lieutenant Mathew as he walked across the median and then saw him momentarily illuminated by the headlights of the oncoming truck. Dearborn heard, but did not witness the actual impact. Firefighter Michael Howard was driving westbound toward the scene and was crossing the Taylor Bayou Bridge approximately 3.3 miles east of the incident when he observed the oncoming tractor-trailer pull to the right and stop on the shoulder. Howard stated that fog was not present on the Interstate highway at that time.

Lieutenant Mathew was thrown by the impact to the grassy median approximately 170 feet east of the point of impact. Firefighter Dearborne and others on the scene checked Mathew, but he had sustained catastrophic injuries and was obviously deceased.

Trooper David Crawford from the Texas Department of Public Safety Highway Patrol arrived shortly after the truck-pedestrian incident and parked his vehicle on the shoulder behind the deputy's patrol car with overhead emergency lights operating. The Hamshire VFD engine arrived shortly after Trooper Crawford and parked in the outside eastbound lane adjacent to the highway patrol car in a blocking position with emergency lights flashing.

Precinct Four Justice of the Peace Ray Chesson was summoned to the scene. Chesson ordered an autopsy and the body was transported to the Jefferson County Medical Examiner's Office.

Trooper Crawford investigated both the original incident and the subsequent truck-pedestrian incident and ordered a blood test of the tractor-trailer driver that struck Lieutenant Mathew in accordance with state and federal regulations. No charges have been filed as of the date of this report.



**Interstate 10 Eastbound Lanes, Mile Marker 833.69, Jefferson County, Texas**

A diagram of the scene is located on the following page.

Accident #: SFMO LODD Investigation # 03-262-03

Address: IH-10 Eastbound Milemarker 833.69, Jefferson County, TX

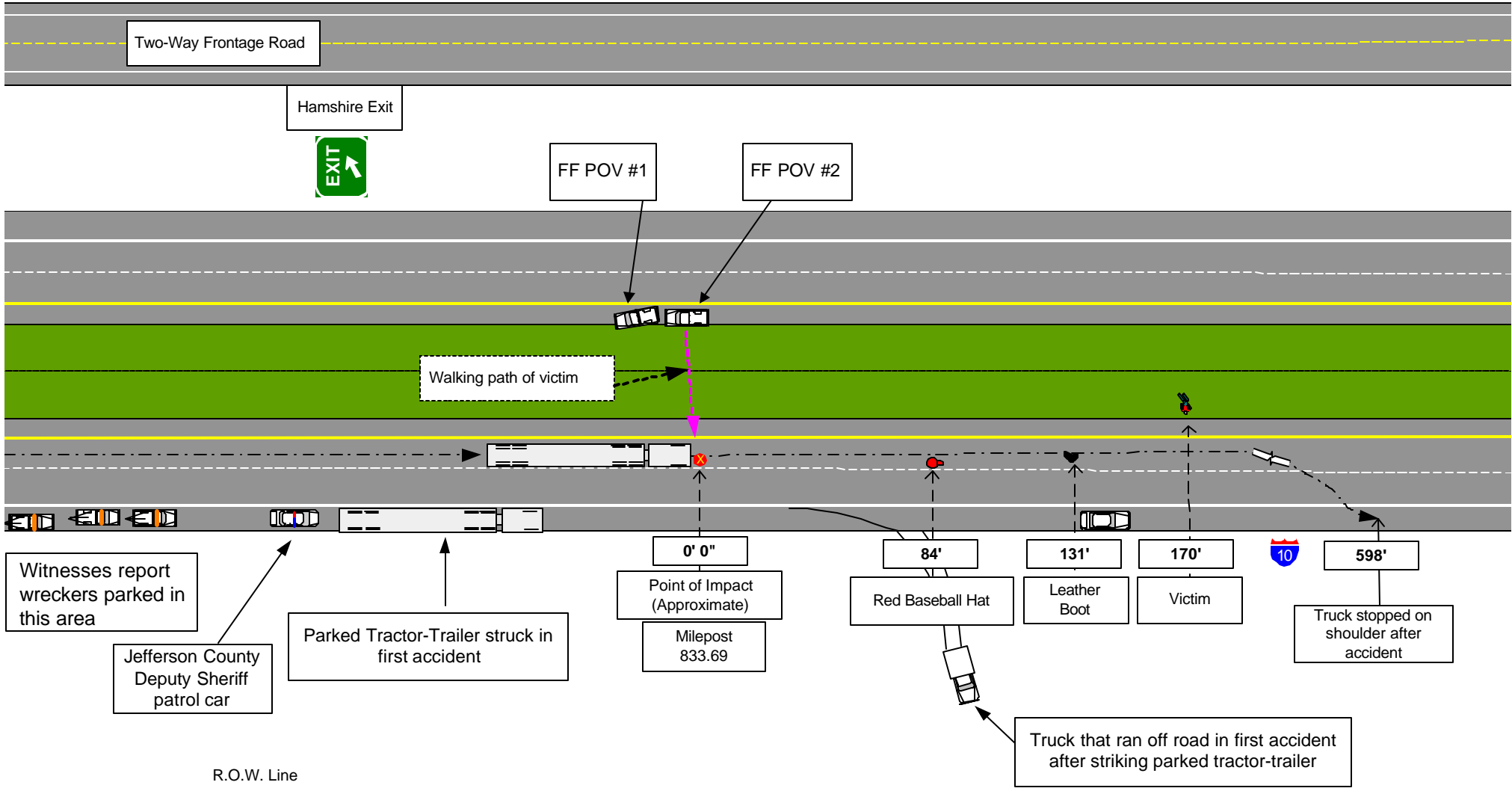


NOT TO SCALE

ALL DIRECTIONS AND DIMENSIONS ARE APPROXIMATE AND BASED ON WITNESS DESCRIPTIONS



R.O.W. Line





## **Weather and Road Conditions**

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The LODD incident occurred at approximately 3:00 a.m. with patchy, heavy fog in the area, but visibility was not impaired. The incident occurred on a straight, level section of interstate highway. There was no construction in the area and there was no roadway lighting. The only illumination on the scene was provided by a full moon and the headlights of parked vehicles. The roadway was dry with no loose foreign material.

## **Personal Protective Equipment Evaluation**

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Lieutenant Mathew was not wearing any firefighter personal protective equipment at the time of the incident. He was wearing a red fire department tee shirt, blue pants, a red baseball cap, and leather boots.

Mathew was not wearing any reflective equipment when the incident occurred. He was not carrying a flashlight. A safety vest with reflective tape was found in his personal vehicle parked at the scene.

## **Medical Examination of Victim**

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The Jefferson County Medical Examiner's report stated that Lieutenant Mathew had sustained multiple extremity fractures, multiple fractures and internal injuries to the torso, and severe craniocerebral injuries.

The cause of death was attributed to severe craniocerebral injuries. A blood test of Lieutenant Mathew did not detect any traces of alcohol or drugs.

## **Training and Personnel Records Evaluation**

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Lance Mathew was recently promoted to Lieutenant. He had attended several weekend training sessions conducted in Beaumont and other area towns as well as departmental training. Mathew had served on the fire department for over two years. He did not hold any fire protection personnel certifications from the Texas Commission on Fire Protection. The LaBelle-Fannett VFD does not participate in the training and certification programs administered by the State Firemen's and Fire Marshal's Association or the Texas Commission on Fire Protection.

## Findings

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***Finding 1:*** Failure of the victim firefighter to park in a safe location where he would not have to cross an active roadway to reach the emergency scene. Failure of the victim firefighter to exercise caution when crossing a roadway.

***Finding 2:*** Failure of emergency personnel on the incident scene to wear protective clothing with reflective trim. Reflective vests or turnout gear were available to most personnel but not worn.

***Finding 3:*** Failure of law enforcement to establish effective control of vehicle traffic at the scene of the emergency. Failure of the fire department to establish Standard Operating Procedures (SOP's) regarding emergency operations for highway incidents.

***Finding 4:*** Failure to establish Standard Operating Procedures (SOPs) regarding the use of private vehicles for emergency response.

***Finding 5:*** Failure of the first firefighter on the scene to establish incident command, to evaluate the emergency scene, and communicate instructions to responding firefighters regarding actions to be taken, safety hazards present, and appropriate protective measures to be taken.

## Recommendations

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The following recommendations are based upon studies funded by the United States Fire Administration and investigation of similar incidents by the National Institute for Occupational Safety and Health and nationally recognized consensus standards for the fire service. All fire departments should be aware of the content of the studies' standards and should develop programs based on them to increase the level of safety for fire department personnel.

**Recommendation #1:** Fire departments should provide training that reinforces the importance for all personnel to follow sound safety practices during emergency operations.

This training should include parking of vehicles in safe locations that minimizes potential traffic conflicts and reduces the risk of collisions.

**Recommendation #2:** Fire departments should ensure that personnel wear appropriate protective clothing, such as a high-visibility reflective safety vest, while operating at an emergency scene at or adjacent to a roadway,

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Programs*, Chapter 7.1.2 states: "Protective clothing and protective equipment shall be used whenever the member is exposed or potentially exposed to the hazards for which it is provided."

The need to wear personal protective clothing such as a reflective, brightly colored vest arises from the fact that personnel need to be highly visible while working on the scene of a motor-vehicle incident. American National Standard Institute 107 recommends that Class 3 high visibility garments be worn by personnel in high risk work activities that take place in or near traffic at speeds over 50 mph and participating in tasks that may distract motorists or divert the attention of the emergency worker from watching for traffic. These garments will help approaching motorists identify workers from over 1,280 feet.



Typical ANSI Class 3 Garment

**Recommendation #3:** Fire departments should ensure that fire fighters establish a protected work area before turning their attention to the emergency.

Fire fighters operating on highways, interstates, turnpikes, and other busy roadways face multiple hazards.

During the investigation of this LODD incident, It became apparent that the authority and responsibility for traffic control at emergency scenes is not clearly defined. Fire departments and state and local law enforcement should meet and work together to establish a formal statement of responsibility for traffic control. The agency designated shall have the duty and responsibility to provide a safe working area for all personnel at scenes of fires and other emergencies on or adjacent to roadways.

Areas that have higher rates of incidents such as vehicle fires or motor vehicle crashes should be evaluated so that standard operating procedures for emergency personnel can be tailored to the needs of particular sites (e.g., blind curves or corners, hills or sloped areas, and high-traffic areas). Fire departments can work with local highway departments and local law enforcement agencies to identify problem areas and devise solutions to those problem areas in advance. Experience and knowledge of local territory will help in creating pre-incident plans and in the establishment of standard operating procedures to make the response more efficient and safer for emergency responders.

**Recommendation #4:** Fire departments should consider limiting or restricting the response of their members in their privately owned vehicles (POVs) to high-volume limited access highway incidents.

NFPA 1500, Chapter 6.2.3 states that "the fire department shall enact specific rules and regulations pertaining to the use of private vehicles for emergency response." NFPA 1500, Chapter 6.2.3.1 states that "these rules and regulations shall be at least equal to the provisions regulating the operation of fire department vehicles." High-volume limited access highways include expressways, toll ways, and multi-lane roadways within the fire department response area. Fire fighters responding to limited-access highway incidents in their privately owned vehicles (POVs) may be ill-equipped to protect themselves or the civilians they are serving from oncoming traffic (firefighters may not be able to provide adequate protection from approaching vehicles). High-volume limited access highways pose additional hazards such as higher speed limits, larger vehicles, and a higher number of vehicles. Responding in a privately owned vehicle may not afford fire fighters the means to carry all of the necessary equipment like personal protective equipment, high-visibility vests, flags, and traffic cones to operate in or near moving traffic. Fire department or agency emergency vehicles can carry all of the required equipment and provide a means to block the scene, providing a safe work zone.

**Recommendation #5:** Fire departments should utilize the Incident Command System (or Incident Management System) at all emergency incidents, including mutual aid incidents.

NFPA 1500 Chapter 8.1.3: The Incident Management System shall be utilized at all emergency incidents. The adoption of the Incident Management System is recommended to ensure the effective use of common terminology during large scale and mutual aid incidents. Incident Commanders must provide strong and clear direction for the incident.

## Information for Consideration

- The National Institute for Occupational Safety and Health has released a Hazard ID publication entitled Traffic Hazards to Fire Fighters While Working Along Roadways which may be accessed on the internet at :

**<http://www.cdc.gov/niosh/hid12.html>**

- The U.S. Fire Administration study on firefighter safety when working near roadways may be viewed on the internet at:

**<http://www.usfa.fema.gov/pdf/cvvfa.pdf>**

A sample decision tree developed by Ron Moore, Fire Training Manager, Plano (TX) Fire Rescue regarding the response of personal vehicles to emergency scenes maybe viewed at **<http://www.cdc.gov/niosh/face200213.html>**.

SOPs should include specific procedures to follow at high-volume, limited access highway operations. An example of a standard operating procedure (SOP) is available for fire departments at **[www.respondersafety.com](http://www.respondersafety.com)**. This sample SOP provides specific information for high-volume, limited access highway operations.