2nd Edition

Emergency Vehicle Safe Operations

For Volunteer and Small Combination Emergency Service Organizations

Revised and Updated 2014

NATIONAL VOLUNTEER FIRE COUNCIL
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Supporting Those Who Serve

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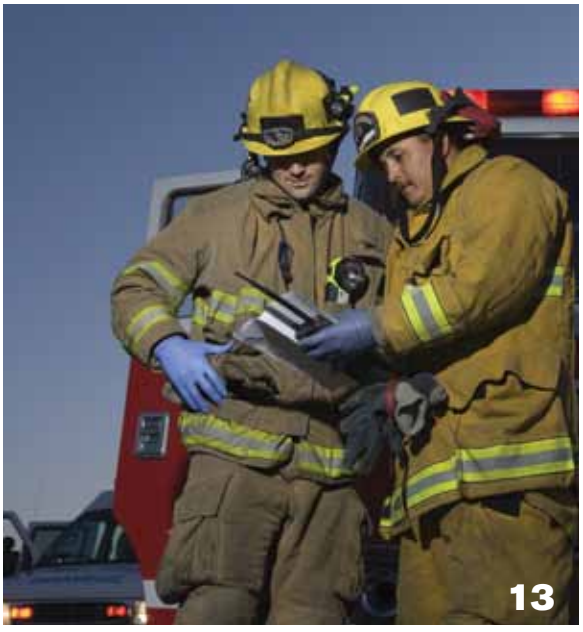
Contents



Emergency Vehicle Safe Operations

For Volunteer and Small Combination Emergency Service Organizations

This report, now in its second edition, is the result of a cooperative agreement between the United States Fire Administration (USFA) and the Department of Transportation Intelligent Transportation System (DOT-ITS) with the National Volunteer Fire Council (NVFC). The objective is to take recommendations from the Fire Service Emergency Vehicle Safety initiative, sponsored by the USFA and DOT-ITS, and develop targeted outreach implementation strategies specifically for the volunteer and combination fire service. In addition, information from the National Fallen Firefighters Foundation's Firefighter Life Safety Initiatives, the National Fire Protection Association's 1451 Standard for a Fire and Emergency Service Vehicle Operations Training Program and existing best practices in the emergency service community were integrated into the research and development of this report.

Year after year, firefighters and EMS providers die as a result of vehicle crashes while responding to or returning from incidents. This represents one of the leading causes of firefighter on-duty fatalities, second only to heart attacks.

Additionally, numerous emergency responders have died while working at an emergency incident scene as a result of being struck by a vehicle. Those who survive such a collision are often left with costly medical expenses, suffering, and long-term pain.

These issues impact the operations of Emergency Service Organizations (ESOs). Vehicle crashes and collisions are very real risks, and steps need to be taken to limit and mitigate these risks to enhance the safety of our personnel. Every ESO member has a personal responsibility in operating emergency vehicles safely.

The USFA, DOT, and the NVFC are committed to mitigating the fatalities, injuries, costs, and reduced efficiency associated with vehicle crashes and collisions. This report presents strategies, best practices, motivational tactics, and sample operating procedures that volunteer and combination departments can use to enhance the safety of responders when it comes to vehicle operations and traffic incident response.

Objective

The NVFC, working with VFIS, Inc., established a work plan to examine recommendations from the U.S. Fire Administration's Fire Service Emergency Vehicle Safety Initiative that applies to the volunteer fire service and emergency services and develops specific implementation strategies.

Strategic Approach

Reducing emergency vehicle near misses, incidents, injuries, deaths, related property damage, and operational impacts start with identifying a core set of best practices. These best practices must be implemented and evaluated locally to match the needs and culture of individual emergency service organizations. In order to successfully implement new best practices or procedures, the organization's culture must understand and accept the changes. If the organization is not ready for change, then it will not happen. Change comes from the top down; the organization's leaders must focus on changing attitudes and helping members understand why change is needed before implementing new policies or procedures.

The best practices outlined in this guide were developed from a series of emergency service-based issues and programs. They are also guided by broader safety engineering principles, including a four-step safety engineering approach to limit incidents and losses. This approach, listed in order of impact and magnitude of results, is as follows:

1. Engineer out the problem.
2. Implement loss reduction techniques.
3. Implement administrative controls.
4. Train personnel to use the proper safety devices and to do the job correctly.

Here are examples to better explain how these principles can apply to emergency service vehicle operations for an organization:

There are many reasons why emergency vehicle safety needs to be addressed:

- The injuries, deaths, property damage, and operational costs of vehicle crashes and collisions are staggering.
- According to the National Safety Council, over 90 percent of the driving public exhibits poor driving habits.
- There is a lack of understanding among personnel of the physical and dynamic forces that affect emergency service vehicle operations.
- There is a general lack of focus on personal safety in the emergency service community.
- There are liability issues and concerns.

Safety Engineering Principle	Example
Engineer out the problem.	Rollover prevention built into apparatus.
Implement loss reduction techniques.	Seatbelts installed and used.
Implement administrative controls.	Standard operating procedures/standard operating guidelines (SOPs/SOGs) implemented and enforced.
Train personnel to use the proper safety devices and to do the job correctly.	Practice driving the vehicle over-the-road in various weather conditions before responding to actual incidents.

Best Practices

The following is a series of best practices in emergency vehicle safe operations that can be evaluated by emergency service organizations (ESOs) and implemented when necessary and appropriate.

Best practices are defined as certain themes that have emerged in recent years that help characterize a situation. Generally traits of a best practice include:

- Acquired knowledge obtained by experience
- The solving of a problem
- Being a meaningful initiative
- An in-depth inquiry of a specific issue
- Being related to independent learning[1]

Best practices are further confirmed by:

- Being evidence based
- Connecting organizational decisions to improve overall organizational success
- Offering very specific intervention and theories to provide a plan to solve a specific problem[2]

Best practices are quality improvement initiatives. When considering the best practices in emergency vehicle safety, 10 key practices stand out. These practices combine known loss exposures, practical tools and techniques to manage risk and loss, and realistic management practices to create an approach that will help manage risk and loss in an ESO.[3]

Each best practice outlined in this section is accompanied by a "quick check" self-assessment tool to help determine where your department stands. A self-assessment is an important first step in reaching your safety goals. Don't worry if you answer "no" to any of these questions. The remainder of this guide is designed to help departments improve on their vehicle safety practices and to build a strong vehicle safety program. The "quick check" feature will simply help to identify the areas that need to be addressed. Use this guide and the additional resources section to start making changes.

1 "What Do We Mean by 'Best Practices'?", www.learner.ors/courses/rft5/ti2web1.htm. 10/14/04.

2 "What Do We Mean by Practice?", The Iowa Consortium, iconsortium.subst-abuse.uiowa.edu/SKIPIIB.html. 10/14/04.

3 "Reliance 10-Point Fleet Risk Control Program", Reliance Insurance Company Risk Control Services. Philadelphia, PA. 2000.

Best Practice #1
Responsible Person

Any effective program starts with a commitment from management. A person must be assigned (or elected) to lead that program who has interest in seeing the program succeed, will be the advocate for the program, and has the necessary authority and responsibility to make the program successful. A successful program results in all levels of the organization accepting responsibility and drives behaviors to assure losses are minimized.

Quick Check:

Does your department have a vehicle safety program?
❑ Yes ❑ No

If yes, has a "responsible person" been assigned?
❑ Yes ❑ No

Best Practice #2
Collision Investigation and Loss Analysis

Conducting collision investigations and near-miss investigations provides a method of identifying what caused a collision and what actions need to be taken to prevent a collision from occurring in the future. These investigations are not conducted to assign blame for the loss. Their purpose is to identify direct and indirect causes to prevent the incident from occurring again. Periodically, but no less than annually, all losses, incidents, and near misses should be analyzed to identify trends. Trend identification will help determine loss prevention needs, program type needs, and appropriate action plans to help prevent future incidents. In addition, this type of activity helps in the development of benchmarks which assist in setting objectives and comparing future progress.

Quick Check:

Does your department investigate collisions?
❑ Yes ❑ No

Does your department investigate near-miss incidents?
❑ Yes ❑ No

Does your department analyze data to identify trends that are used to improve your vehicle safety program?
❑ Yes ❑ No

Best Practice #3
Regulatory and Statute Compliance

Compliance with local, state, and national regulations and statutes is mandatory. Failure to comply makes the organization vulnerable to potential conflicts that may result in serious adverse financial, operational, and legal situations. All drivers, including those operating privately-owned vehicles, must meet appropriate license and insurance requirements.

Quick Check:

Does your department comply with all local, state, and national regulations?
❑ Yes ❑ No

Do your department's drivers meet the appropriate license and insurance requirements?
❑ Yes ❑ No

Best Practice #4
Training

Training is an important first step in understanding the requirements of any policy or procedure. Over time, ESO members must be trained in a variety of issues and at multiple levels. All training should be driven by the expectations set by the officers and by the SOPs and SOGs. Vehicle training should be mandatory and should ensure that drivers understand their duties and expectations when operating the ESO's equipment. In addition to basic and periodic refresher training, training should include a specific emergency vehicle operations course (EVOC), a review of the SOPs/SOGs affecting vehicle operation, personal accountability training, an understanding of each vehicle's design, operations, and limitations, a course on traffic incident management, and a special course on each new vehicle placed into service by the ESO.

The instruction should integrate classroom, hands-on, online, simulation (if available), and an over-the-road test. These multiple training initiatives suggest the need for a comprehensive driver training program.

Quick Check:

Does your department have training SOPs/SOGs dealing with vehicle safety?
❑ Yes ❑ No

Is your department's vehicle training mandatory?
❑ Yes ❑ No

Best Practice #5
Loss Prevention Practices

In order to manage the impact of loss on an organization, it is important to develop and implement appropriate loss prevention practices. For emergency vehicle operations, this consists of a combination of engineering and operational issues, including driver selection procedures, routine maintenance and vehicle inspection programs, SOPs/SOGs, warning devices, a substance abuse program, an alcohol policy, speed limitations, electronic monitoring systems, reduced apparatus response, priority dispatching, traffic preemption systems, on the quiet responses, and reflective striping, to name the most significant ones. **But perhaps none is more basic than ensuring the use of seatbelts**. Policy enforcement is imperative.

Quick Check:

Has your department developed and implemented loss prevention practices?
❑ Yes ❑ No

Best Practice #6
Managing Driver Behavior

Business and industry have found several ways to manage driver behavior. Primarily management occurs by monitoring the driver and identifying unacceptable driving behaviors and attitudes. Monitoring behavior and enforcing rules will result in positive change. Methods include:

- Officer and peer monitoring/review
- Periodic checking of motor vehicle records
- Enforcement of SOP/SOGs
- Using award programs to recognize positive driving behaviors

Action must be taken when poor driving behaviors are observed or the driver will continue to practice poor habits.

Quick Check:

Does your department monitor its drivers to identify unacceptable behaviors and attitudes?
❑ Yes ❑ No

Does your department take action when drivers exhibit poor habits?
❑ Yes ❑ No

Best Practice #7
Hot Topics

Hot topics occur periodically, usually emanating from unique situations, losses, new regulations, deaths or serious injury, or any situation requiring the timely communication of specific information. Generally, these topics are communicated by emails, newsletters, or training programs. Current hot topic initiatives in the emergency services include the safe operation of personally owned vehicles (POV), the use of seatbelts, intersection safety, rollover safety, operating safely at incidents or on highways (traffic incident management), and collisions with other ESOs.

The concept of highway safety has achieved significant exposure resulting in the development of the National Institute of Safety and Health's (NIOSH) safety criteria, the expansion of advanced warning, the development of the American National Standards Institute's (ANSI) protective equipment standards, and the creation of training initiatives from the Federal Highway Administration, to name a few. All of these efforts share the goal of limiting injuries and saving lives.

Quick Check:

Does your department stay informed on current initiatives and hot topic issues?
❑ Yes ❑ No

Best Practice #8
Report Incidents

The timely reporting of incidents is a critical component of the loss management sequence to ensure that the injured are treated and the details are not forgotten. Preparation includes both a procedure and an employee training component to teach drivers how to respond when an incident occurs. This process ensures that the injured parties are treated promptly, properly, fairly, and compassionately, and are directed to a physician or facility providing quality care for the least amount of inconvenience and cost.

Quick Check:

Does your department report incidents in a timely manner?
❑ Yes ❑ No

Do your department's drivers know what procedure to follow if an incident occurs?
❑ Yes ❑ No

Best Practice #9
Apparatus and Vehicle Design and Construction

ESOs are quick to request unique apparatus for their community. Unfortunately, very few ESO personnel are design engineers and most do not truly understand what a piece of apparatus can do or what it can hold. Once the tasks and performance demands for the vehicle are determined, inform the design engineers and let them decide on the vehicle. Place the responsibility for design and construction on the manufacturer. In recent years vehicles have become bigger, faster, heavier, and easier to maneuver. Without a proper understanding of the differences in stopping distance, the center of gravity (and rollover potential), and safe maneuvering practices, a harmful incident is highly probable.

Quick Check:

Does your department fully understand the capabilities of its vehicles/apparatus?
❑ Yes ❑ No

Do you involve design engineers when determining which vehicles/apparatus are best suited to meet your performance demands?
❑ Yes ❑ No

Best Practice #10
Highway Safety

The concept of highway safety has achieved significant exposure resulting in extensive research and the development of best practices from such organizations as the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Federal Highway Administration (FHWA), the National Fire Protection Association (NFPA), the Transportation Research Board (TRB), and the National Transportation Safety Board (NTSB). This research culminated in the development of a recommended Traffic Incident Management (TIM) system. Some best practices in TIM include:

- Planning multi-agency communication and coordination
- Development of SOPs/SOGs
- Understanding pertinent laws, standards, and regulations
- Use of the National Incident Management System (NIMS)
- Use of early warnings to alert the motoring public
- Establishing safe work zones and ensuring all members stay inside of this work zone
- Understanding strategic vehicle placement and blocking to create a safe work zone
- Understanding the proper on-scene operations
- Avoiding a zero buffer at an incident scene
- Understanding "move it or work it" – moving an incident out of travel lanes or working an incident in travel lanes
- Ensuring the safe and quick clearance of traffic incidents
- Consideration of apparatus design and equipment

Quick Check:

Is your department familiar with the Traffic Incident Management (TIM) system?
❑ Yes ❑ No

Behavior Management/Motivation

How do you manage behavior and motivate people? There are many different contexts that this question could be applied to, such as getting people to join an organization, getting existing personnel to be more active, or even just getting people to clean up after themselves. The truth of the matter is that you do not motivate people to do things. Unless an individual wants to do something, the effort given to the task will be less than 100 percent.

Motivating people has mistakenly come to mean that an external force must be applied before someone will do something. In reality, for someone to be motivated he or she must have a desire to perform the task that is being asked of them. Motivation is an internal feeling, a raging fire already burning inside, trying to get out.

In his book *Good to Great*, Jim Collins says that spending energy trying to motivate people is largely a waste of time for one simple reason – if the organizational culture is focused and the right people are in the right positions, then people will be self-motivated. He also states that great companies pay little attention to motivating people or creating alignment because under the right conditions, problems with commitment, alignment, motivation, and resistance to change just disappear.

Remember the last eager new hire or volunteer that walked into the department on the first day? Were their eyes big, were they often smiling, and did they seem to possess huge amounts of energy? This person was motivated and ready to do anything you asked. What happens after a month, a year, or 10 years? Is that energy still present? Where has that energy gone? Managers or administrators try hard to "motivate" people to regain that energy that was once overflowing. Why? The question is not "how do we motivate people?" but rather, "how did this person become de-motivated?"

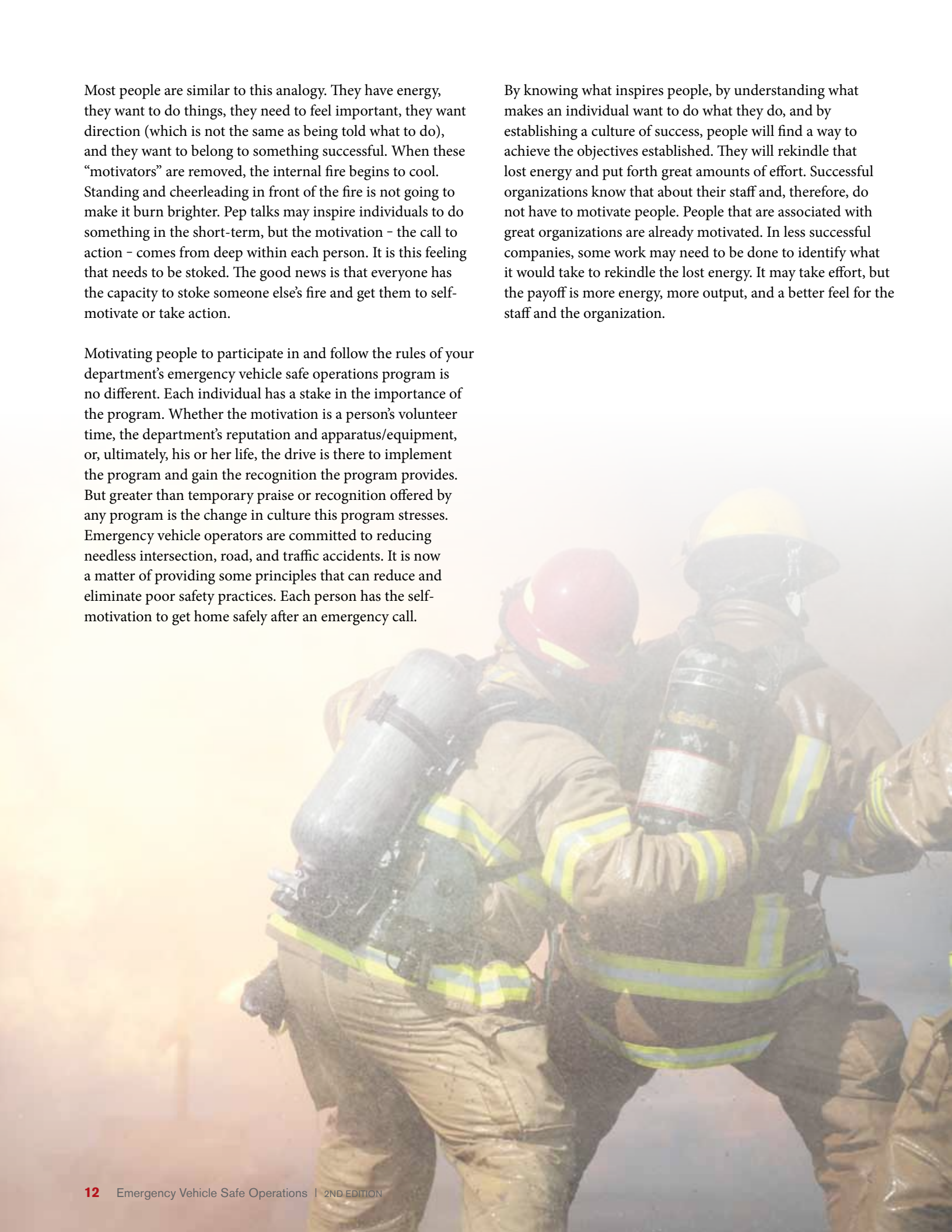
Administrators believe that increased pay or trinkets will suddenly re-motivate. However, most studies show that these efforts do not provide motivation, but rather satisfaction. There is a huge difference between the two. What keeps the fire burning is deeper than incentives.

When a person loses their desire to perform or go the extra mile, often it is not because of their lack of interest. Just like a fire that is not fed, a person's interest will slowly decrease in intensity, energy, and glow. Left alone long enough, the fire's embers cool. However, if a constant supply of the right kind of fuel is added at just the right time, that fire will burn forever. A fire does not have to be "motivated" to burn; it just burns.

Most people are similar to this analogy. They have energy, they want to do things, they need to feel important, they want direction (which is not the same as being told what to do), and they want to belong to something successful. When these "motivators" are removed, the internal fire begins to cool. Standing and cheerleading in front of the fire is not going to make it burn brighter. Pep talks may inspire individuals to do something in the short-term, but the motivation – the call to action – comes from deep within each person. It is this feeling that needs to be stoked. The good news is that everyone has the capacity to stoke someone else's fire and get them to self-motivate or take action.

Motivating people to participate in and follow the rules of your department's emergency vehicle safe operations program is no different. Each individual has a stake in the importance of the program. Whether the motivation is a person's volunteer time, the department's reputation and apparatus/equipment, or, ultimately, his or her life, the drive is there to implement the program and gain the recognition the program provides. But greater than temporary praise or recognition offered by any program is the change in culture this program stresses. Emergency vehicle operators are committed to reducing needless intersection, road, and traffic accidents. It is now a matter of providing some principles that can reduce and eliminate poor safety practices. Each person has the self-motivation to get home safely after an emergency call.

By knowing what inspires people, by understanding what makes an individual want to do what they do, and by establishing a culture of success, people will find a way to achieve the objectives established. They will rekindle that lost energy and put forth great amounts of effort. Successful organizations know that about their staff and, therefore, do not have to motivate people. People that are associated with great organizations are already motivated. In less successful companies, some work may need to be done to identify what it would take to rekindle the lost energy. It may take effort, but the payoff is more energy, more output, and a better feel for the staff and the organization.



Standard Operating Guidelines & Procedures

It is essential that all ESOs develop, adopt, and implement standard operating procedures and guidelines. Concepts such as sovereign immunity (individual vs. government) have been significantly limited and narrowed by the courts, and today's standard operating procedures and guidelines reflect these limitations.

Many federal, state, and provincial laws allow for suits against individual leaders of ESOs. Terms such as "duty of care," "breach of omission or commission," and "joint and several liability" are now recognizable to emergency services personnel. One important way to prepare for this challenge is to develop, adopt, and implement a comprehensive set of Standard Operating Procedures (SOPs) or Standard Operating Guidelines (SOGs).

During the process of compiling SOPs/SOGs, the difference between documents may become blurred. The distinction between policy and procedure is not always clear. Policy is different from SOPs/SOGs. All procedures and guidelines come with policy. Policy should be viewed as the attitude, philosophy, and intent of top management. It constructs a framework and provides guidance for the organization's personnel during the decision-making process. An understanding of specific terms and their definitions is essential when developing SOPs/SOGs:

Policy - A guiding principle or course of action adopted toward an objective or objectives. Describes the general principle that will guide behavior or a definite course or method of action to guide and determine present and future decisions.

Procedure - Prescribes specific ways of doing specific activities and regulates the formal steps into an action. It provides a series of steps followed in a particular order.

Guideline - A statement, indication, guide, or outline of policy used to determine a current or future course of action.

Regulation - A rule or order prescribed by authority to regulate conduct.

Rules and Regulations - Principles set up by authority that prescribes or directs action or forbearance.

For example:

Policy - Go from Point A to Point B.

Procedure - Begin at Point A and go to Point B by following the prescribed directions.

Guideline - Begin at Point A and go to Point B. Unlike a procedure, does not give explicit directions.

Rules and Regulations - Do not cross any line and do not backtrack.

In the evaluation of policy, it is essential to obtain input from the organization's members. The following are questions that should be considered regarding policy:

- Is it founded on sound judgment?
- Is it reasonably attainable?
- Is it within legal and/or regulatory boundaries?
- Is it definite, positive, and clear?
- Does it need further definition or explanation?
- Is it applicable to all organizational units?
- Is it flexible? Should it be flexible?
- Does it reflect the general thinking and enforcement philosophy of all levels of personnel?
- Will (or must) it be supported by procedures, guidelines, rules, and regulations?
- Can it be enforced?
- Will it be enforced?

Conducting a Needs Assessment

The SOG/SOP process should include a needs assessment. Every ESO should periodically conduct a formal review of guidelines and procedures. These assessments should be conducted by a task force or committee composed of organizational members representing all ranks and possibly other agencies (e.g. an attorney or policy analyst from the local government). The product of this formal review results in a roadmap for developing SOGs/SOPs.

The needs assessment process must be consistent, systematic, and take place at regular intervals. The end product should include a written analysis of current procedures and guidelines, provide recommendations, explain the rationale for changes (if any), identify priorities, and include an action plan. Although major changes in legal and/or operational requirements will prompt a formal needs assessment, the process should be performed annually to help keep SOGs/SOPs current and valid.

It is important to remember that guidelines and procedures must reflect reality. Creating SOGs/SOPs that cannot be implemented with existing resources serves little purpose and may create a safety hazard. Revisions to critical health and safety procedures and guidelines should receive a high priority in the action plan since they influence the health and safety of responders and the effectiveness of operations.

Formulation Procedure

Decrees issued from those in charge may not receive widespread support. It is not realistic to expect members of an emergency service organization to enthusiastically support SOGs/SOPs when they are formulated and issued without member input and involvement. The formulation procedure can be an integral component in having the finished product be effective and realistic, as well as supported.

Although the exact methods used to develop SOGs/SOPs will vary, certain strategies will help define a successful process. The needs assessment process establishes the foundation for the development effort. Various organizations have found the following recommendations very effective in developing and implementing SOGs/SOPs:

- Inform the membership of the need to develop, adopt, and implement SOGs/SOPs and how that process should be undertaken.
- Build a development team. Commit to utilizing task forces, committees, or guideline groups and involving the members of the organization.

Procedures and guidelines are most effective when members of the organization are included in the development process. As a general rule, organizations should get input from all of the groups that may be affected.

A key variable in determining success or failure during implementation is keeping the product user friendly. The following suggestions can help attain this goal:

- Level of detail: SOGs/SOPs should provide only broad procedural guidelines.
- Clarity and conciseness: SOGs/SOPs must be clear and concise.
- Simple statements: use language that members can easily understand.
- Target audience: SOGs/SOPs should be written to address the needs and educational level of the majority of the organization's members.
- Flexibility and ambiguity: An organization's SOGs/SOPs should be precise but inherently flexible to allow for an acceptable level of situational judgment.

Terminology is also important. One example is using the terms "shall" and "may" when writing SOPs/SOGs. Personnel generally consider an action preceded by the word "shall" to be an inviolate rule (SOP), while using the term "may" implies greater flexibility and discretion by personnel (SOG). SOGs/SOPs are not training manuals. They are broad organizational guidelines for performing tasks that members

have been trained to accomplish safely and effectively. As such, they must be communicated effectively. Simply writing them down and expecting personnel to read and implement them is insufficient.

A standard format for guidelines and procedures helps to streamline the writing process. Different formats may be used for SOGs depending on the intended audience and purpose. Several standard items are usually included in a SOG:

- Numbering system
- Effective date
- Expiration/review date
- Title
- Description of purpose or rationale statement
- Authority signature(s)
- Scope
- General procedures
- Specific procedures
- References

Periodic Review

SOGs/SOPs are not static documents – they should be regularly reviewed and updated. This is not to suggest that every guideline and procedure needs to be altered at each review, but that each one should be periodically evaluated to see if any updating, correcting, fine-tuning, or other changes are necessary. The review process is more important than the number of SOGs/SOPs that are changed. Change just for the sake of change is not recommended. Personnel become familiar and comfortable operating under established procedures/guidelines.

Regular performance monitoring and evaluations should also be conducted. The purpose of performance monitoring is to make sure that personnel comply with the guidelines and procedures and perform them correctly. In effect, performance monitoring asks, "Are we doing things right?"

Evaluation looks at the same employee action, but asks, "Are we doing the right thing?" The goal in this case is to assess and redesign the SOGs/SOPs. Most organizations strive to review them annually. This schedule is preferred if resources allow. Many smaller organizations conduct an annual review but only cover half of the manual. This provides a biannual review, with individual SOGs/SOPs changed as needed in the interim.

This section provides examples and potential content for SOGs/SOPs addressing various aspects of emergency services vehicle operations. It is not inclusive and should NOT simply be copied and adopted. The guidelines should be used to improve or develop guidelines and procedures that fit your department's needs.

The following samples are included in this guide.

- Backing Apparatus
- Collision Investigation
- Crash and Injury Investigation
- Driver Qualifications
- Driver Selection
- Drug and Alcohol Policy
- Highway Safety
- Intersection Navigation
- Limitations of Warning Devices
- Motor Vehicle Record Check
- On-The-Quiet Response
- Priority Dispatching
- Reflective Striping and Roadway Vests
- Regulatory and Statute Compliance
- Responding in Private Vehicle
- Routine Maintenance
- Safe Driving Award Program
- Seatbelt Use and Hearing Protection Policy
- Speed Limitations
- Traffic Incident Management – Optimum Vehicle Placement
- Traffic Preemption
- Use of Personal Electronic Devices
- Vehicle Design and Construction
- Vehicle Inspection
- Vehicle Safety Program Management

All of the suggestions provided in the sample SOGs/SOPs for each of these topics are basic points to consider. Evaluate the needs and characteristics of your organization to identify additional points to include.

Backing Apparatus

Purpose:

To ensure vehicle is safely moving when operating in reverse mode.

Scope:

All personnel.

Responsibility/Rationale:

It is the primary responsibility of the driver and officer to ensure the vehicle is safely moving in a reverse position to prevent death, injury, and property damage.

Key Points to Consider/Include:

- When backing the apparatus, there must be a spotter visible to the driver.
- When backing, the vehicle will be under the direction of the person at the back of the vehicle who is in the sight of the driver.
- Operator will respond to all directions made by the person directing the backing of the vehicle. Do not operate the vehicle unless the spotter is in sight.
- Take a three-dimensional look while backing to assure overhead obstructions are identified.
- Back up SLOWLY.
- In cases where there is no spotter available, the operator MUST perform a 360 walk-around to ensure there are no obstacles or challenges in backing up.

Collision Investigation

Purpose:

To provide a process to investigate and record all collisions and near misses involving organization vehicle-related incidents (departmental or personal).A near miss incident is defined as an incident in which no property damage and no personal injury occurred, but where, given a slight shift in time, position, or other circumstances, damage or injury would or may have occurred.

Scope:

All personnel.

Responsibility/Rationale:

To investigate each incident/near miss to determine the cause in order to prevent similar future incidents and reduce death, injury, and property loss. This supplements any local/law enforcement issues and is for internal use intended for quality control and training to make the ESO safer.

Key Points to Consider/Include:

- Educate staff as to the purpose of investigative need.
- Who will conduct the investigation?
- What questions will be asked?
- What form will be used? (Attach a copy to your procedure.)
- What should be done as a result of the investigation?
- Who is responsible for follow-up?
- Who is responsible for data tracking?
- Who will act on the conclusions reached once the comprehensive data is developed?

Crash & Injury Investigation

Purpose:

To provide guidance on investigating crashes/vehicle incidents.

Scope:

All personnel.

Policy:

It is the policy of the ESO to investigate most crashes and incidents involving apparatus and privately-owned vehicles (POVs); POVs should be investigated when on ESO business. The senior officer available will determine the necessity of a full or condensed incident investigation. This decision is somewhat subjective but should favor a full investigation. A condensed investigation is considered an exception to the rule.

The following situations require a full investigation:

- Estimated damage is greater than $750 (or based on insurance deductible).
- The damaged vehicle cannot be transported under its own power.
- The member-driver receives a traffic citation.
- There are other extenuating circumstances.
- There are injuries that require medical treatment.
- The incident results in significant property damage.
- A full investigation could be called for any other crash at the discretion of the senior officer present.

An investigation will begin within 48 hours of the incident and will conclude within seven days of the incident. The investigation report will detail the root causes of the crash, a corrective action plan to help prevent similar occurrences in the future, and recommendations for disciplinary action if necessary. Photographs of damage to the apparatus and/or equipment must be taken.

Procedures:

Vehicular Crashes:

The driver of the vehicle must provide a verbal report to the senior officer available as soon as possible (preferably within one hour). Failure to notify will result in an immediate 30-day suspension from the department.

If the incident occurs during a response, consideration must be given to completing the response, but it is not a requirement. Normal information exchange must occur between the ESO personnel and the affected public.

Immediately after the incident (or as soon as possible), the driver of the ESO vehicle will be suspended from driving ESO apparatus and the use of POV emergency equipment until the crash receives a preliminary investigation and a decision is made to allow or disallow driving. The senior officer available usually performs this investigation as long as he or she is not directly involved in the incident. Drug/alcohol tests may or may not be required by the agency having jurisdiction.

The driver of the vehicle involved in the incident must complete a written report within six hours of the incident and submit it to the senior officer available.

Injury Incidents:

The immediate priority after an injury incident will be the appropriate treatment of the injured person(s).

Consistent with fireground injuries, a vehicle-related injury must be reported to the Incident Commander and/or senior officer present as soon as possible. Other injuries obtained while on ESO business or on ESO premises are to be reported to the senior officer available.

Investigation:

The senior officer available will appoint an ad hoc investigative committee within two days of the incident. The committee will consist of that senior officer (unless that officer was involved or is a direct witness), the departmental safety officer, if available, and a representative group of additional personnel (if the department is made up of multiple stations, then include on representative from each additional station). If the senior officer available was involved, then the next most senior officer available will assume responsibility for the investigation. The investigation committee will gather any and all information necessary to determine the cause(s) of the incident and to determine what measures are necessary to prevent similar occurrences in the future. If the incident is deemed preventable, the committee will also determine appropriate suspension, termination, and/or training that may be necessary for those involved.

A preliminary report of the investigation findings will be prepared. The report will include a description of the incident, the immediate and root cause(s), and the corrective actions deemed appropriate. A diagram of the incident should be included if it will add clarity to the investigation. The elected officers will assign primary ownership for completion of the corrective actions. Closure of the corrective actions and supporting documentation (if any) will be included in the final report. Final crash reports will be maintained in a crash file and, if appropriate, in the individual personnel files of those involved.

Driver Qualifications

Purpose:

To set forth qualifications and requirements to be a driver of fire apparatus for the ESO. The driver of the vehicle may be someone other than the emergency service apparatus operator, and this may require an additional SOP/SOG for the ESO.

Scope:

All personnel who drive the ESO's vehicles.

Responsibility/Rationale:

To become a qualified driver/operator for the ESO, a person must meet these qualifications to help prevent death, injury, and property loss.

Key Points to Consider/Include:

- Time/length of service in organization
- Experience as firefighter/EMT/etc.
- Possession of valid driver's license for type of vehicle being driven
- Response volume percentage
- Completion of organization's driver training program
  - Knowledge
  - Skills
  - Complete Emergency Driver and Vehicle Training (EDVT) course
  - Complete over the road course
- Completion of other relevant training (traffic incident management, etc.)
- Authorization from appointed ESO official
- Federal, state, and local laws and regulations
- Motor Vehicle Record (MVR) checks
- Current physical exam
- Recertification

Driver Selection

Purpose:

To establish guidelines for selecting drivers of department-owned and personal vehicles.

Scope:

All drivers of department-owned vehicles and personal vehicles.

Responsibility/Rationale:

To reduce death, injury, and property loss.

Key Points to Consider/Include:

- Physical requirements and evaluation
- Age requirements
- Driver's license
  - Annual department review
  - Motor vehicle reports
  - Obtained prior to starting training
- Loss of department driving privileges
  - Types of violations
  - Progressive discipline
    - Verbal warning
    - Written warning
    - Suspension
    - Discharge
    - Review process
    - Accident investigation
- Personal vehicles
  - Use of lights and sirens
  - Inspection and maintenance
  - State requirements
  - Insurance
- Completion of Emergency Vehicle Operator course
- Refresher Training
- Training on new apparatus upon receipt by the organization

Drug & Alcohol Policy

Purpose:

To eliminate the use and/or influence of drugs and alcohol through education, rehabilitation, and supervision techniques, and to raise awareness of the adverse effects on driving caused by some prescription and over-the-counter medications.

Scope:

All personnel.

Responsibility/Rationale:

To understand the impact of alcohol and drugs (both legal and illegal) on the individual, organization, and general public, and to prevent death, injury, and property damage.

Key Points to Consider/Include:

- Informing employees about drug/alcohol testing
- Supervisor education
- Testing process (per the agency having jurisdiction)
- Sample collection
- Drug/alcohol testing (per the agency having jurisdiction)
- Medical review by physician
- Laboratory results
- Pre-employment screening
- Rehabilitation
- Awareness of possible side effects of prescription and over-the-counter medications
- Conflicts with other laws
- Transportation
- Review procedures
- EAP programs
- Confidentiality

Highway Safety

Purpose:

To establish the guidelines for protection of personnel, motorists, and incident victims at all highway incident scenes.

Scope:

All personnel.

Responsibility/Rationale:

To make personnel highly visible in all weather and light conditions, to position warning devices and apparatus to provide advance warning to motorists, and to provide as much protection as possible for all emergency responders present at a highway incident. This guideline is needed to prevent death, injury, and property damage.

Key Points to Consider/Include:

- Wearing of American National Standards Institute (ANSI) approved reflective clothing by all personnel on scene
- "Move it or work it" – can the incident be moved or does the response have to occur in the travel lane(s)
- Placement of warning devices and traffic channeling devices by first-in apparatus
- Positioning of first-in apparatus
- Placement of additional warning signs and traffic channeling devices by later-arriving apparatus
- Movement through a zero buffer
- Staging
- Communication coordination between all agencies involved
- Prior planning with all agencies that may potentially be involved
- Scene lighting
- Unified command system
- Coordinate training and SOG/SOP development with other emergency responders, e.g., law enforcement, tow operators
- Educate law enforcement of the necessity to protect emergency responders
- Minimize personally operated vehicle response as much as possible
- Refresher training

Intersection Navigation

Purpose:

To establish procedures and guidelines for the safe operation of all ESO vehicles and apparatus when negotiating intersections.

Scope:

All personnel.

Responsibility/Rationale:

It is the responsibility of all personnel and associated parties to adhere to this policy to prevent death, injury, and property damage. The largest percentage of major accidents involving emergency vehicles happens at intersections. Even with the use of warning devices, intersections pose a serious threat to the safety of emergency services personnel as well as the public.

Procedures:

Controlled Intersections:

Any intersection controlled by a stop sign, yield sign, yellow traffic light, or a red traffic light requires prudent action by the emergency vehicle driver. The following steps should be followed:

- Do not rely on warning devices to clear traffic.
- Scan the intersection for possible hazards (right turns on red, pedestrians, vehicles traveling fast, etc.) as well as driver options.
- Begin to slow down well before reaching the intersection and cover the brake pedal with the driver's foot, continuing to scan in four directions (left, right, front, and back).
- Change the siren cadence at least 200 feet from the intersection.
- Scan intersection for possible passing options (pass on right, left, wait, etc.) and avoid using the opposing lane of traffic if at all possible.
- If all visible traffic in all lanes cannot be accounted for, the driver should bring the vehicle to a complete stop. If the driver proceeds past a control device (stop sign/red light) with a negative right-of-way without coming to a complete stop, both the driver and officer should be required to complete an incident report providing an explanation of the circumstances that permitted them to do so.
- Establish eye contact with other vehicle drivers, have a partner communicate that all is clear, and reconfirm that all other vehicles are stopped.
- Account for one lane of traffic at a time, treating each lane of traffic as a separate intersection.

Railroad Intersections:

Any time an emergency vehicle driver approaches an unguarded rail crossing, the driver shall bring the apparatus or vehicle to a complete stop before entering the grade crossing. In addition, the driver shall perform the following actions prior to proceeding:

- Turn off all sirens and air horns.
- Operate the motor at idle speed.
- Turn off any other sound-producing equipment or accessories.
- Open the windows and listen for a train horn.

Uncontrolled Intersections:

When approaching any intersection that does not offer a control device (stop sign, yield, or traffic signal) in the emergency vehicle's direction of travel, or where a traffic control signal is green upon the approach of the emergency vehicle, all emergency vehicle drivers should do the following:

- Scan the intersection for possible hazards (right turns on red, pedestrians, vehicles traveling fast, etc.).
- Observe traffic in all four directions (left, right, front, rear).
- Slow down and cover the brake pedal with the driver's foot.
- Change the siren cadence no less than 200 feet from intersection.
- Avoid using the opposing lane of traffic if possible.

Emergency vehicle drivers should always be prepared to stop. If another vehicle operator fails to yield the right of way to an emergency vehicle, the emergency vehicle driver should not try to force the right of way, nor should he or she assume the right of way. You do not have the right of way until the other vehicle yields to you.

Limitations of Warning Devices

Purpose:

To establish a policy on the use and limitations of warning devices.

Scope:

All personnel.

Responsibility/Rationale:

It is the responsibility of emergency vehicle operators to reduce death, injury, and property damage.

Key Points to Consider/Include:

- Rights vs. privilege
  - The difference between a "right" and a "privilege"
  - What responsibility is carried
- Laws, SOGs, standards
  - What is stated in the law
  - Review your SOGs
  - NFPA 1500, 1002, and1250
- Types of warning devices
  - Siren
  - Warning lights
  - Other warning devices, such as car horn or air horn
- Pitfalls of relying on warning devices
  - Failure to yield by another driver
  - Understand why drivers fail to yield
- Define an emergency
- Non-emergency response
- Siren capability
- Statutes controlling emergency vehicle lighting

Motor Vehicle Record Check

Purpose:

To establish a procedure for motor vehicle operator record checks for drivers/operators.

Scope:

All personnel.

Responsibility/Rationale:

Department officers should conduct routine administrative reviews of all drivers' motor vehicle records (MVRs) to provide for the safe operation of department motor vehicles. Knowing your drivers' on- and off-duty driving habits and records is an important tool in both selecting and maintaining the safest drivers for your emergency vehicles.

Produres:

- Driver MVR checks should be performed prior to the start of driver training.
- MVR should be checked annually or every three years at a minimum, and a copy should be retained in each member's personnel file.
- If MVR are not checked annually then the following items should be checked annually and copies retained in personnel file:

1. Validation of a current motor vehicle driver's license
2. Proof of insurance on private vehicle

- MVR review criteria:
    - Class A Violation (definitions follow)
        - Any individual who has a Class A violation within the past three years normally receives a license suspension from the Department of Motor Vehicles. ESOs should consider the suspension of department vehicle driving privileges for 18 months or the length of state license suspension. No driver should be permitted to drive without a license. The driver must attend an approved driver-improvement program or equivalent training and be required to get recertified to operate emergency apparatus.
    - Class B Violation (definitions follow)
        - Any individual who has a combination of two Class B moving violation convictions and/or chargeable accidents in a three-year period should be issued a warning letter from the fire chief or administrative officer.
        - Any individual who has a combination of three Class B moving violations and/or chargeable accidents in a three-year period will be issued a suspension of department apparatus driving privileges for a period of 90 days by order of the fire chief or administrative officer.
        - Any individual who has more than three moving violations and/or chargeable accidents or any combination of more than three formerly stated violations in a three-year period will be issued a suspension of department vehicle driving privileges for a period of one year. In addition, the same individual is required to complete an approved driver improvement program and be recertified to operate emergency vehicles.
    - NOTE: Unusual circumstances in individual cases would be evaluated on a case-by-case basis.

Violation definitions:

Class A

- Driving while intoxicated
- Driving under the influence of drugs
- Negligent homicide arising out of the use of a motor vehicle (gross negligence)
- Operating any licensed vehicle during a period of suspension
- Using a motor vehicle for the commission of a felony
- Aggravated assault with a motor vehicle
- Operating a motor vehicle without owner's authority
- Permitting an unlicensed person to drive
- Reckless driving
- Hit-and-run driving

Class B

- All moving violations not listed as Type A violations (i.e. exceeding the posted speed limit)

NOTE: There may be state/local privacy and permission issues that need to be evaluated before implementing this policy. For example, the state Department of Health might have regulations pertaining to EMS vehicles. Check with your locality and state regarding laws involving emergency vehicle operator suspension.

On-The-Quiet Response

Purpose:

There are specific types of incidents that by their nature are not threatening to life or property. These types of incidents are to utilize an on-the-quiet response (also known as reduced speed).

Scope:

All personnel and all vehicles.

Responsibility/Rationale:

On-the-quiet (also known as reduced speed) responses are to be used in compliance with local jurisdiction regulations, which range from automatic alarm system activations to vehicles leaking fuel and other incidents where local experience suggests a response is necessary, but not at emergency speed or procedure. The types of incidents to which an on-the-quiet response are recommended are totally dependent upon local decision.

Policy:

No audible or visual warning signals are to be used.

Upon notification that the incident is indeed an emergency, vehicles should proceed in standard emergency response fashion.

Priority Dispatching

Purpose:

To prioritize the response of emergency service units to ensure maximum utilization of resources and ensure units are responding in a mode that corresponds with the prioritization level of the emergency request.

Scope:

All personnel.

Responsibility/Rationale:

It is the responsibility of all personnel and associated parties to adhere to this policy in order to prevent death, injury, and property damage.

Policy:

Certification in an Approved Emergency Dispatch (ED) Program:

Public Safety Answering Points (PSAP) shall confirm that call takers are certified under a recognized ED program and are offered the required recertification and continuing education to fulfill the needs of the certification.

Regional EMS and Fire Protocols:

Regional medical advisory and fire service committees shall ensure present dispatch guidelines adhere to and practice recognized ED standards. Protocols, guidelines, and policies must all follow established standards and response procedures.

Systemized Caller Interrogation Process:

Call intake should be methodical, standardized, and without deviation from recognized ED program standards. Call takers shall not deviate from established protocols for any reason not clearly defined in the call taking process.

Systemized Pre-arrival Medical Instructions:

The provision of standardized pre-arrival medical instructions is critical to an ED program. Positive patient outcome is very dependent on the provision of basic instructions and medical assistance.

Tiered EMS Responses:

The appropriate utilization of EMS resources is highly dependent on the ED process. Use of Advanced Life Support (ALS) units for Basic Life Support (BLS) responses, dual dispatch of ALS and BLS units for single patient events, and fire service first response are examples of situations in which

resources could be better utilized. The triage of calls, the assigning of case-specific EMS units, and the inclusion of First Responders are all critical aspects of a tiered system.

Quality Assurance/Case Review Process:

Emergency service agencies shall incorporate into present quality assurance programs a mechanism in which PSAPs are a vital aspect. On a regular basis, services shall review responses and cross-reference the priority response level assigned to the call. Records shall be maintained and utilized for the overall improvement of the system. Emergency services shall be provided with a defined chain of command/liaison with the local PSAP with the intention of reviewing cases and continuously improving the system's efficiency.

Classification of Responses (EMS Based):

This section reflects the most common priority code system. Some departments may use alternate systems.

- Alpha – Emergency response: No lights/no sirens. BLS Solitary response.
- Bravo – Emergency response: Lights/sirens.
- Charlie – Emergency response: Lights/sirens.
- Delta – Emergency response: Lights/sirens.
- Echo – Emergency response: Lights/sirens.

NOTE: Fire department activity responses will be assigned Alpha responses unless there is confirmed injury/entrapment. Behavioral emergency responses shall be assigned Alpha responses unless call-taking information dictates a higher priority response.

Alpha responses: In the case of responses assigned an Alpha response, EMS units, though still responding in the immediate mode, shall respond without the use of warning lights and/or audible devises. This response mode does not change the fact the unit is responding to an emergency, it simply suggests the mode in which the unit physically responds to the scene of the emergency.

Call dispatch: On the initial dispatch of an emergency call, call takers/communication technicians will ensure the following information is included in the dispatch:

- Station/units assigned to the response
- Location of the emergency
- Nature of the emergency
- Response mode assigned as determined by the ED program/process
- Any additional/pertinent medical information relayed by the caller or responding agencies on scene

Call Downgrading/Upgrading:

Responding crews shall be provided with additional information based on information available to the PSAP. Field crews shall not make decisions to alter a response mode based on personal suspicion or belief. Responding units may consider altering the response mode based on additional information provided by the PSAP or information relayed from police, fire, or other EMS agencies on scene. Based on this information, the PSAP will, if required, alter the response mode and alert responding units.

Call/Unit Rerouting:

During periods of high call volume or multiple responses within specific jurisdictions, ONLY the PSAP shall have the control over re-routing units to higher/lesser priority assignments based on demand, unit availability, and status of responding units (ALS vs. BLS).

Reflective Striping and Roadway Vests

Purpose:

To provide guidance for proper protection of personnel and equipment while on the incident scene through visibility utilizing reflective striping, and to reduce the risk of injury or death to personnel and reduce damage to company vehicles while working in or near traffic.

Scope:

All personnel.

Responsibility/Rationale:

To prevent death, injury, and property damage.

Policy:

All personnel will don personal protective equipment (PPE) – coats, vests, pants – that meet or exceed the minimum requirements of reflective striping as established by the American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) 107 and 207, and the U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD) Section 6E.02.

All apparatus will meet or exceed the reflective striping standards of the current edition of NFPA 1901.

All barrier or directional devices will meet or exceed the MUTCD and the Federal Highway Administration's standards for reflective striping.

Definitions:

Class I - safety vests when traffic speeds are less than 25 mph, workers are separated from approaching traffic, and workers can give full attention to the traffic

Class II - safety vests when traffic speeds exceed 25 mph, work takes place in or near moving traffic or during inclement weather, and workers' attention is occasionally diverted from traffic

Class III - work environment is high task load, wide range of weather conditions, traffic can exceed speeds of 50 mph, the nature of the work forces the worker to utilize full range of motion, and workers' attention must be focused on the task

Level I - high visibility

Level II - high visibility and flame retardant

Level III - high visibility, flame retardant, and electric-arc-resistant burn protection helmets with reflective trim material that covers all sides shall be worn while emergency service personnel are working in or near moving traffic

Personal Protection (MUTCD and ANSI/ISEA):
MUTCD states that all workers shall wear bright, highly visible clothing when working in or near moving traffic. ANSI/ISEA 107 and 207 recommends specific types of reflective equipment are worn while working in or near moving traffic such as the following:

1. Emergency responders shall wear Class III Level III PPE garments while involved in vehicle extrication, fire suppression, accident clean up, or incident investigation that subjects ESO personnel to moving traffic.
2. Emergency responders who are involved in medical triage and stabilization and all other support functions are required to wear Class III Level II PPE.

Traffic Cones (MUTCD):
Traffic cones guide the direction of traffic flow around an incident. Any traffic cone used at night or at an incident where traffic speeds exceed 45 mph must meet the following criteria:

1. Be 28 to 36 inches tall
2. Have a six inch-wide white band located three to four inches from the top of the cone and an additional four inch-wide white band located two inches below the six inch band
3. Be orange in color

Traffic cones used during the day or on low-speed roadways must meet the following criteria:

1. Be a minimum of 18 inches tall
2. Be orange in color

Traffic cones larger than 36 inches must meet the following criteria:

1. Alternating orange and white reflective stripes that are four to six inches wide
2. Each cone should have a minimum of two orange and two white stripes – the top stripe should be orange
3. The non-reflective spaces should not exceed three inches in width

Emergency Response Vehicles (NFPA 1901):

1. Reflective striping is required around all four sides of the vehicle. The stripe or combination of stripes must be at least four inches high and cover at least 50 percent of the cab and body length on each side, 50 percent of the rear width, and 25 percent of the front width.
2. A reflective graphic design, such as a door shield or lettering, may replace a part of the required length or width.

Vertical Panels (NFPA 1901):
Apparatus chevron striping can be used to warn and direct traffic away from a highway incident. All vehicles that are utilized in this manner shall comply with MUTCD Section 6F.57.

The chevron pattern shall slant downward on both sides of the vehicle at an angle of 45 degrees, pointing in the direction of the bottom rear corner of the tailboard. The pattern should resemble an inverted V with the point at the top and center of the apparatus and cover at least 50 percent of the rear-facing vertical surfaces.

Each stripe in the chevron pattern should be a single color. Stripes can alternate between red, and either yellow, fluorescent yellow, or fluorescent yellow-green.

References:

United States Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Control Devices, Section 6E.02

Occupational Safety and Health Administration (29 CFR 1926.200 through 29 CFR 1926.203) NFPA 1901, Automotive Fire Apparatus Standard 2009

American National Standard for High Visibility Safety Apparel 107

American National Standard for High Visibility Safety Apparel 207

Regulatory & Statute Compliance

Purpose:

To ensure knowledge and compliance with state and federal statutes and with local/departmental regulations governing operation of emergency vehicles.

Scope:

All personnel.

Responsibility/Rationale:

Chief officers, safety officers, and training officers should teach and enforce compliance. All drivers/operators are also individually responsible for complying with driving regulations and statutes in order to prevent death, injury, and property damage.

Key Points to Consider/Include:

- Appropriate driver's licensing
- POV insurance
- SOPs/SOGs
- Driver training
- Appropriate use of warning devices
- Speed limitations
- Hazards of impaired driving
- MUTCD requirements
- Vehicle code exemptions for emergency vehicles
- State vehicle driving laws pertinent to emergency vehicles
- Review components of NFPA 1250, 1002, 1901, 1911, 1912, 1915, and 1500 for additional items to consider

Responding in Private Vehicles

Purpose:

To establish guidelines governing the response to department events/incidents in POVs.

Scope:

All personnel.

Responsibility/Rationale:

Personnel must operate their POV in a safe and prudent manner when traveling to and from incidents, the station, meeting locations, etc. to reduce deaths, injury, and property damage. Personnel must use seatbelts while operating POVs.

Key Points to Consider/Include:

- Respond to the station or to the incident location per fire department protocol
- Exceptions for officers (however, officer should lead by example)
- When responding consider:
- Traffic laws and any related immunities
- Use of warning devices, such as emergency warning lights and sirens (if permitted)
- Use of seatbelts
- Courtesy practices to other drivers
- Proper parking at emergency services locations
- School buses
- Highway restrictions
- Calls outside primary fire zone
- Potential liability for accidents
- Action if violation occurs
- Loss of driving privileges
- Loss of fire department privileges

Routine Maintenance

Purpose:

To ensure that vehicles are well maintained so that they may respond safely and perform efficiently at the emergency scene.

Scope:

Maintenance personnel and vehicle drivers/operators.

Responsibility/Rationale:

It is the responsibility of chief officers, company officers, drivers, and maintenance staff to prevent death, injury, and property damage.

Key Points to Consider/Include:

- NFPA 1915, Standard for Fire Apparatus Preventive Maintenance Program
- NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications
- NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus
- NFPA 1914, Standard for Testing Fire Department Aerial Devices
- Develop maintenance SOG, including "out of service" criteria
- Develop routine maintenance forms, routing system, and follow-up requirements
- Develop SOP for reporting irregularities
- Develop maintenance follow-up program
- Perform maintenance at regular intervals, time periods, hours, fuel consumption amounts, etc. following SOG/SOP
- Have knowledge of manufacturer's specifications
- Document all maintenance, maintaining data on each vehicle for the life of the vehicle
- Responsibilities of the driver

Safe Driving Award Program

Purpose:

To establish a safe driving award program.

Scope:

All personnel.

Responsibility/Rationale:

To incentivize safe driving habits to reduce loss of life, injury, and property damage.

Key Points to Consider/Include:

A safe driving award program can be created to reward and recognize drivers for exemplary behavior and clean records. Consider:

- Establishing an awards committee.
- Setting award guidelines, criteria, and program rules.
- Determining who is eligible to participate.
- Determine a points structure.
- What are the rewards/awards?
- Departments should check local, state, and federal guidelines regarding gaming, cash prizes, and tax reporting before granting incentive prizes.

Seatbelt and Hearing Protection Use Policy

Purpose:

To establish positive behavior regarding the use of seatbelts and hearing protection when operating or riding in a vehicle.

Scope:

All personnel.

Responsibility/Rationale:

To ensure a culture of buckling up seatbelts and applying headsets before any vehicle movement occurs in order to prevent death, injury, or property damage.

Key Points to Consider/Include:

- Remain seated and belted anytime the vehicle is in motion.
- Buckle up before the vehicle moves.
- Use seatbelts whether in personal vehicle or department vehicle.
- In most states, it is the law to wear seatbelts while operating a vehicle.
- DO NOT unfasten seatbelts until you are sure the vehicle is stopped and you are not going to move.
- Wear approved hearing protection to minimize hearing loss and to improve hearing and listening to receive commands and information.

Speed Limitations

Purpose:

To establish practices that limit the speed of vehicles to allow the driver/operator to maintain safe control of the vehicle at all times.

Scope:

All personnel.

Responsibility/Rationale:

To have all personnel understand that operating a vehicle above safe speeds greatly increases the probability of an accident in order to prevent death, injury, and property damage.

Key Points to Consider/Include:

- State laws on vehicle speeds
- Exemptions to state laws
- Impact of exercising exemption to state law
- Speed limitations for each vehicle and reasons why
- Technical reasons for limiting speed (weight, center of gravity, etc.)
- Weather condition considerations
- Reaction time of driver and stopping distance
- With advent of early warning systems, the need to rush to fires has dramatically diminished
- Review NFPA 1500, Fire Apparatus, Equipment, and Drivers/Operators, Chapter 6

Traffic Incident Management – Optimum Vehicle Placement

Purpose:

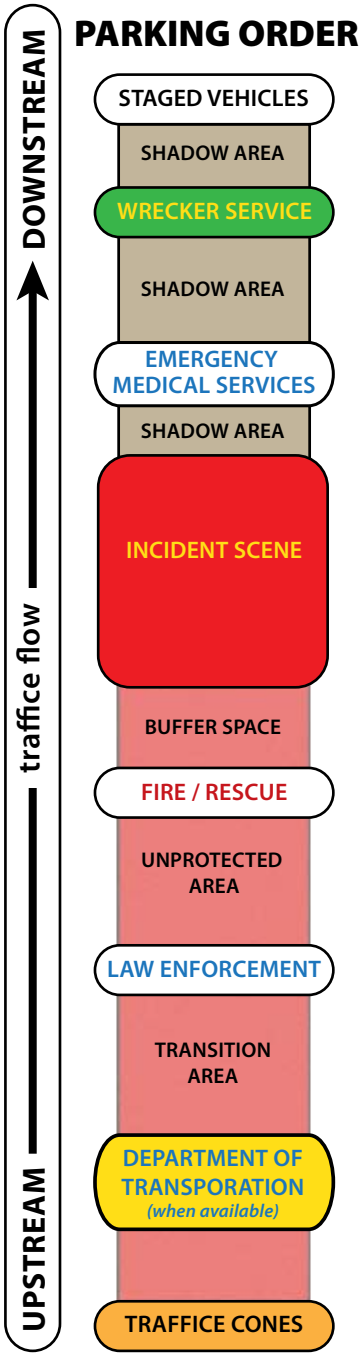
To make responses on the highway by emergency vehicles safer by effectively placing apparatus at the scene.

Scope:

All vehicle operators and officers.

Procedures:

This procedure provides a suggested order of vehicle placement at an accident scene to enhance safe operations at the scene of an incident occurring on a highway. This can be modified at the incident scene based upon the situation or need.



Responder Goals
Do not park on the opposite side of the road or in the opposite direction of travel.
Create an open lane(s) policy to get resources to the incident faster. Minimize closed lanes.
First arriving fire or rescue should angle vehicle (block) in the direction of the merge when personnel are not at risk.
Provide a 50' to 100' buffer space between you and the incident scene.
Remove lane closures, relocate to the shoulder, or demobilize as soon as possible unless requested for traffic control.
Fire or rescue should deploy a 200' taper with traffic cones to redirect traffic. Space the cones at each skip line.
Contact the Department of Transportation for hazmat, overturned tractor trailers, fatality investigations, multiple vehicle accidents, or other long-term incidents.

Traffic Preemption

Purpose:

To make responses by emergency vehicles safer and timelier through the installation and maintenance of traffic preemption systems at various signalized controlled intersections throughout the jurisdiction.

Scope:

All vehicle operators and officers.

Responsibility/Rationale:

To use the traffic preemption system on all dispatched emergency responses and when transporting all emergency class patients to medical facilities in order to prevent death, injury, and property damage.

Procedures:

- When warning lights/sirens are activated, use traffic preemption devices.
- Turn off the traffic preemption emitter and warning devices when ordered to "reduce speed" or any order that means there is no longer an emergency.
- The emitter is not to be used during non-emergency functions, e.g., parades, community functions, store/food runs, etc.
- All personnel qualified to drive vehicles with emitters must attend training before operating a vehicle with an emitter.
- Use of the emitter system DOES NOT guarantee or grant right-of-way.
- Install the emitter device so that it will automatically turn off when transmission is in the park position or when the vehicle braking system is applied.
- All emitters must have on/off switch to allow unit to be turned off.
- There shall be a method for checking the system periodically to ensure it works.

Use of Personal Electronic Devices

Purpose:

To define the restrictions on apparatus operators and officers in the use of personal electronic devices while operating emergency vehicles.

Scope:

All vehicle operators and officers.

Policy:

Under no circumstances are employees allowed to place themselves or others at risk to fulfill business needs.

Employees whose job responsibilities include regular or occasional driving and who are issued a cellphone for business use are expected to refrain from using their phone while driving, except with the use of a hands-free device and in accordance with applicable laws. Every effort should be made to pull to the side of the road to a safe location prior to answering or initiating phone calls. In situations where job responsibilities include regular driving and accepting of business calls, the City will provide hands-free equipment. This rule also applies to use of privately-owned cellphones during business hours.

Employees whose job responsibilities do not specifically include driving as an essential function, but who are issued a cell phone for business use, are also expected to abide by the provisions above.

Employees who are charged with traffic violations resulting from the use of their cellphone while driving will be solely responsible for all liabilities that result from such actions.

Vehicle Design & Construction

Purpose:

To develop, in accordance with NFPA standards, operational uses, performance requirements, and a list of equipment that will be carried for new apparatus in order to allow the manufacturer to engineer the apparatus.

Scope:

Specification committee.

Responsibility/Rationale:

It is the primary responsibility of the fire chief, specification committee, safety officer, training officer, purchasing agent, maintenance personnel, and drivers to prevent death, injury, and property damage.

Key Points to Consider/Include:

- Form an apparatus committee.
- Perform a needs assessment of the community and mutual aid capabilities.
- Only develop use and performance requirements.
- Have the manufacturer engineer and design the vehicle.
- Consider safety devices such as airbags; warning, scene, and ground lighting; non-slip working surfaces; vehicle striping; heavy equipment placement; automatic tire chains; etc.
- Consider chassis and manufacturer options.
- Follow GSA Ambulance Standard KKK-A-1822 for ambulance units.

Follow NFPA guidelines:

- NFPA 1901, Standard for Automotive Fire Apparatus and "Apparatus Purchasing Specification Form" Appendix B
- NFPA 1906, Standard for Wildland Fire Apparatus
- NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus
- NFPA 1912, Standard for Fire Apparatus Refurbishing

Vehicle Inspection

Purpose:

To ensure vehicles and equipment are in working order and that the vehicles are safe and ready to respond.

Scope:

All personnel.

Responsibility/Rationale:

It is the primary responsibility of the driver and company officer to conduct a regular vehicle inspection in order to prevent death, injury, and property damage.

Key Points to Consider/Include:

- Develop a vehicle and equipment inspection SOP/SOG.
- Develop a routine inspection form.
- Inspect vehicle and equipment after every usage.
- Develop an SOP for reporting irregularities.
- Inspect vehicles and equipment daily/weekly following the SOP/SOG.
- Develop workable "out of service" criteria using NFPA 1911, 1914, and 1915.
- Follow NFPA 1002, Standard on Fire Apparatus Driver/Operator Professional Qualifications requirements for performing an inspection.
- Have knowledge of manufacturer's specifications and inspection recommendations.
- Document inspections on applicable form, have a routing system, and have a follow-up procedure.

Vehicle Safety Program Management

Purpose:

To identify an individual to manage and champion a vehicle safety program.

Scope:

All officers.

Responsibility/Rationale:

To define the components of managing a vehicle safety program and how to implement it in order to prevent death, injury, and property damage.

Key Points to Consider/Include:

- Champion
  - Who?
  - Role/task
  - Limitation
- Authority
  - Who?
  - Role/task
  - Limitation
- Responsibility
  - Who?
  - Role/task
  - Limitation
- Accountability
  - Who?
  - Role/task
  - Limitation
- Rewards/incentives

Additional Resources

The following organizations can provide resources such as training, best practices, educational tools, data, and details applicable standards.

Action Training Systems: www.action-training.com

Cumberland Valley Volunteer Firemen's Association's Emergency Responder Safety Institute: www.respondersafety.com

Federal Highway Administration Office of Operations: www.ops.fhwa.dot.gov/eto_tim_pse/

International Association of Fire Chiefs: www.iafc.org

International Fire Service Training Association: www.ifsta.org

International Society of Fire Service Instructors: www.isfsi.org

National Fallen Firefighter Foundation: www.firehero.org

National Fire Protection Association: www.nfpa.org
The following standards were mentioned in this document:

- NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications: **www.nfpa.org/1002**
- NFPA 1250, Recommended Practice in Fire and Emergency Service Organization Risk Management: **www.nfpa.org/1250**
- NFPA 1451, Standard for a Fire and Emergency Services Vehicle Operation Training Program: **www.nfpa.org/1451**
- NFPA 1500, Standard on Fire Department Occupational Safety and Health Program: **www.nfpa.org/1500**
- NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments: **www.nfpa.org/1582**
- NFPA 1901, Standard for Automotive Fire Apparatus: **www.nfpa.org/1901**
- NFPA 1906, Standard for Wildland Fire Apparatus: **www.nfpa.org/1906**
- NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus: **www.nfpa.org/1911**
- NFPA 1912, Standard for Fire Apparatus Refurbishing: **www.nfpa.org/1912**
- NFPA 1914, Standard for Testing Fire Department Aerial Devices: **www.nfpa.org/1914**
- NFPA 1915, Standard for Fire Apparatus Preventive Maintenance Program: **www.nfpa.og/1915**

National Highway Traffic Safety Administration: www.nhtsa.gov

National Institute of Occupational Safety and Health: www.cdc.gov/niosh

National Safety Council: www.nsc.org

National Volunteer Fire Council: www.nvfc.org

Nonprofit Risk Management Center: www.nonprofitrisk.org

Public Risk Entity Institute: www.riskinstitute.org

U.S. Fire Administration: www.usfa.fema.gov

VFIS: www.vfis.com

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NATIONAL VOLUNTEER FIRE COUNCIL
ORG. 1976
Supporting Those Who Serve

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