

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 1 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

SAFE POSITIONING WHILE OPERATING IN OR NEAR MOVING TRAFFIC

Purpose: The following procedures shall apply to routine (non-emergency) and emergency operations of apparatus. (NFPA 1500)

Scope: All Personnel

Guideline:

1. Overview

- 1.1. This procedure identifies parking practices for Fire Marshal Office Vehicles, Apparatus and other on-scene vehicles that will provide maximum protection and safety for personnel operating in or near moving vehicle traffic. It also identifies several approaches for individual practices to keep firefighters safe while exposed to the hazardous environment created by moving traffic.
- 1.2. **It shall be the policy of the DCFMO to position apparatus and other emergency vehicles at a vehicle-related incident on any street, road, highway or expressway in a manner that best protects the incident scene and the work area. Such positioning shall afford protection to fire department personnel, law enforcement officers, tow service operators and the motoring public from the hazards of working in or near moving traffic.**
- 1.3. All personnel should understand and appreciate the high risk that personnel are exposed to when operating in or near moving vehicle traffic. Responders should always operate within a protected environment at any vehicle-related roadway incident.
- 1.4. Always consider moving vehicles as a threat to your safety. At every vehicle-related emergency scene, personnel are exposed to passing motorists of varying driving abilities. At any time, a motorist may be driving without a legal driver's license. Approaching vehicles may be driven at speeds from a creeping pace to well beyond the posted speed limit. Some of these vehicle operators may be vision impaired, under the influence of alcohol and/or drugs, or have a medical condition that affects their judgment or abilities. In addition, motorists may be completely oblivious to your presence due to distractions caused by cell phone use, loud music, conversation, inclement weather, and terrain or building obstructions. Approaching motorists will often be looking at the scene and not

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 2 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

the roadway in front of them. Assume that all approaching traffic is out to get you until proven otherwise.

- 1.5. Nighttime incidents requiring personnel to work in or near moving near traffic are particularly hazardous. Visibility is reduced and driver reaction time to hazards in the roadway is slowed.

2. Terminology

The following terms shall be used during incident operations, post-incident analysis, and training activities related to working in or near moving traffic.

1. **Advance Warning-** notification procedures that advise approaching motorists to transition from normal driving status to that required by the temporary emergency traffic control measures ahead of them.
2. **Block- positioning a fire department apparatus on an angle to the lanes of traffic** creating a physical barrier between upstream traffic and the work area. Includes 'block to the right' or 'block to the left'.
3. **Buffer Zone-** the distance or space between personnel and vehicles in the protected work zone and nearby moving traffic.
4. **Downstream-** the direction that traffic is moving as it travels away from the incident scene.
5. **Flagger-** a fire department member assigned to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the highway scene
6. **Shadow-** the protected work area at a vehicle-related roadway incident that is shielded by the block from apparatus and other emergency vehicles.
7. **Taper-** the action of merging several lanes of moving traffic into fewer moving lanes.
8. **Temporary Work Zone-** the physical area of a roadway within which emergency personnel perform their fire, EMS and rescue tasks at a vehicle-related incident.
9. **Transition Zone-** the lanes of a roadway within which approaching motorists change their speed and position to comply with the traffic control measures established at an incident scene.
10. **Upstream-** the direction that traffic is traveling from as the vehicles approach the incident scene.

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 3 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

3. Safety Benchmarks

- 3.1. All emergency personnel are at great risk of injury or death while operating in or near moving traffic. There are several specific tactical procedures that should be taken to protect all crew members and emergency service personnel at the incident scene including;
 - 3.1.1. Never trust approaching traffic
 - 3.1.2. Avoid turning your back to approaching traffic
 - 3.1.3. Establish an initial “block” with the first arriving emergency vehicle or fire apparatus
 - 3.1.4. Always wear Class III high visibility reflective vests during daylight operations
 - 3.1.5. Always wear firefighting or Rescue helmet
 - 3.1.6. Wear full protective clothing plus the highway safety vest at all vehicle-related emergencies between the hours of dusk and dawn or whenever lighting levels are reduced due to inclement weather conditions
 - 3.1.7. Turn off all sources of vision impairment to approaching motorists at nighttime incidents including vehicle headlights and spotlights. Aim spotlights and floodlights so as to illuminate working personnel and not in the eyes of oncoming drivers. We want them to see our members.
 - 3.1.8. Use fire apparatus and police vehicles to initially redirect the flow of moving traffic
 - 3.1.9. Establish advance warning and adequate transition area traffic control measures upstream of incident to reduce travel speeds of approaching motorists
 - 3.1.10. Use traffic cones and/or cones illuminated by flares where appropriate for sustained highway incident traffic control and direction
 - 3.1.11. Establish a fire department member assigned to the “Flagger” function to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the highway scene

DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES	REVISION DATE 6/4/2018
SUB DOCUMENT ROADWAY SAFETY & VEHICLE BLOCKING	OPERATIONS PAGE 4 OF 12
DCFM #	400-003

4. Apparatus and Emergency Vehicle Benchmarks

- 4.1. Listed below are benchmarks for Safe Parking of **apparatus and emergency vehicles** when operating in or near moving traffic.
 - 4.1.1. Always position first-arriving apparatus to protect the scene, patients, and emergency personnel.
 - 4.1.1.1. Initial apparatus placement should provide a work area protected from traffic approaching in at least one direction.
 - 4.1.1.2. Angle apparatus on the roadway with a “block to the left” or a “block to the right” to create a physical barrier between the crash scene and approaching traffic.
 - 4.1.1.3. Allow apparatus placement to slow approaching motorists and redirect them around the scene.
 - 4.1.1.4. Use fire apparatus to block at least one additional traffic lane more than that already obstructed by the crashed or burning vehicle(s).
 - 4.1.1.5. When practical, position apparatus in such a manner to protect the pump operator position from being exposed to approaching traffic.
- 4.2. Positioning of large apparatus must create a safe parking area for EMS units and other fire vehicles. Operating personnel, equipment and patients should be kept within the “shadow” created by the blocking apparatus at all times.
- 4.3. When blocking with apparatus to protect the emergency scene, establish a sufficient size work zone that includes all damaged vehicles, roadway debris, the patient triage and treatment area, the extrication work area, personnel and tool staging area and the ambulance loading zone.
- 4.4. Ambulance should be positioned within the protected work area with their rear patient loading door area angled away from the nearest lanes of moving traffic
- 4.5. Command shall stage unneeded emergency vehicles off the roadway or return these units to service whenever possible.
- 4.6. At all intersections, or where the incident may be near the middle lane of the roadway, two or more sides of the incident will need to be protected.

DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES	REVISION DATE 6/4/2018
SUB DOCUMENT ROADWAY SAFETY & VEHICLE BLOCKING	OPERATIONS PAGE 5 OF 12
DCFM #	400-003

- 4.7. Police vehicles must be strategically positioned to expand the initial safe work zone for traffic approaching from opposing directions. The goal is to effectively block all exposed sides of the work zone. The blocking of the work zone must be prioritized, from the most critical or highest traffic volume flow to the least critical traffic direction.
- 4.8. For first arriving engine or truck company where a charged hoseline may be needed, block so that the pump panel is “down stream”, on the opposite side of on-coming traffic. This will protect the pump operator. This may not be possible if the first arriving apparatus is the only responding apparatus.
- 4.9. At intersection incidents, consider requesting police response. Provide specific directions to the Officer(s) as to exactly what your traffic control needs are. Ensure that police vehicles are parked in a position and location that provides additional protection of the scene.
- 4.10. Traffic cones shall be deployed from the rear of the blocking apparatus toward approaching traffic to increase the advance warning provided for approaching motorists. Cones identify and only suggest the transition and tapering actions that are required of the approaching motorist.
- 4.11. Personnel shall place cones and flares and retrieve cones while facing oncoming traffic.
- 4.12. Traffic cones shall be deployed at 15 foot intervals upstream of the blocking apparatus with the furthest traffic cone approximately 75 feet upstream to allow adequate advance warning to drivers
- 4.13. Additional traffic cones shall be retrieved from other responding units to extend the advance warning area for approaching motorists.

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 6 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

5. Incident Command Benchmarks

- 5.1. The **initial-arriving company officer** and/or the **Incident Commander** must complete critical benchmarks to assure that a safe and protected work environment for emergency scene personnel is established and maintained including;
 - 5.1.1. Assure that the first-arriving apparatus establishes an initial block to create an initial safe work area. As per Section 4.1.1.
 - 5.1.2. Assign a parking location for all ambulances as well as later-arriving apparatus.
 - 5.1.2.1. Lanes of traffic shall be identified numerically as “Lane 1”, “Lane 2”, etc., beginning from the right to the left when right and left are considered from the approaching motorist’s point of view. Typically, vehicles travel a lower speed in the lower number lanes.
 - 5.1.2.2. Directions “Right” and “Left” shall be as identified as from the approaching motorist’s point of view left or right.
 - 5.1.2.3. Instruct the driver of the ambulance to “block to the right” or “block to the left” as it is parked at the scene to position the rear patient loading area away from the closest lane of moving traffic.
 - 5.1.3. Assure that all ambulances on-scene are placed within the protected work area (shadow) of the larger apparatus.
 - 5.1.4. Assure that all patient loading into Med Units is done from within a protected work zone.
 - 5.1.5. The initial company officer and/or Incident Commander must operate as the Scene Safety Officer until this assignment is delegated.
 - 5.1.6. At residential medical emergencies, Command shall direct ambulances to park at the nearest curb to the residence for safe patient loading whenever possible. Whenever possible, apparatus should refrain from entering the driveway and allow EMS complete access. The chauffeur or another available member should assist EMS in backing into or from the driveway or lane.

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 7 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

6. Emergency Crew Personnel Benchmarks

6.1. Listed below are benchmarks for safe actions of **individual personnel** when operating in or near moving vehicle traffic.

6.1.1. Always maintain an acute awareness of the high risk of working in or near moving traffic. They are out to get you!

6.1.2. Never trust moving traffic.

6.1.3. Always look before you move!

6.1.4. Always keep an eye on the moving traffic!

6.1.5. Avoid turning your back to moving traffic.

6.1.6. Personnel arriving in crew cabs of fire apparatus should exit and enter the apparatus from the protected 'shadow' side, away from moving traffic.

6.1.7. Officers, apparatus operators, crew members in apparatus with individual jump seat configurations and all ambulance personnel must exit and enter their units with extreme caution remaining alert to moving traffic at all times.

6.1.8. Protective clothing, Class III safety vest, and helmet must be donned prior to exiting the emergency vehicle.

6.1.9. During normal daylight lighting conditions, don helmet and Class III safety vest or structural PPE and Class III vest when operating in or near moving traffic.

6.1.9.1. During dusk to dawn operations or when ambient lighting is reduced due to inclement weather conditions, don helmet, full protective clothing and Class III vest.

6.1.9.2. All personnel of any agency responding into Davie County, arriving on an apparatus or emergency vehicle must don assigned helmet and Class III vest at a minimum, prior to exiting their vehicle.

6.1.10. Always look before opening doors and stepping out of apparatus or emergency vehicle into any moving traffic areas. When walking around fire apparatus or emergency vehicle, be alert to the your proximity to moving traffic.

6.1.10.1. Stop at the corner of the unit, check for traffic, and then proceed along the unit remaining as close to the emergency vehicle as possible.

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 8 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

6.1.10.2. Maintain a 'reduced profile' when moving through any area where a minimum 'buffer zone' condition exists.

6.1.11. Police or Fire personnel may place traffic cones or flares at the scene to direct traffic. This action builds upon initial FD cone deployment and can be expanded, if needed, as later arriving Police or Fire personnel arrive. Always place and retrieve cones while facing on-coming traffic.

6.1.12. Placing flares, where safe to do so, adjacent to and in combination with traffic cones for nighttime operations greatly enhances scene safety. Where safe and appropriate to do so, place warning flares to slow and direct approaching traffic.

DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES	REVISION DATE 6/4/2018
SUB DOCUMENT ROADWAY SAFETY & VEHICLE BLOCKING	OPERATIONS PAGE 9 OF 12
DCFM #	400-003

7. High-Volume, Limited Access Highway Operations

Interstate 40 is a High-volume limited access highway. The North Carolina State Highway Patrol and North Carolina Department of Transportation (NCDOT) have a desire to keep the traffic moving on these high-volume thoroughfares. When in the judgment of FD Command it becomes essential for the safety of operating personnel and the patients involved, any or all lanes, shoulders, and entry/exit ramps of these limited access highways can be completely shut down. This, however, should rarely occur and should be for as short a period of time as practical.

- 7.1. Unique Safe Parking procedures at limited-access, high-volume multi-lane roadway incidents;
 - 7.1.1. First-arriving apparatus shall establish an initial block of the lane(s) occupied by the damaged vehicle plus one additional traffic lane.
 - 7.1.2. A 2nd Arriving apparatus shall be automatically dispatched to all vehicle-related incidents on all limited-access, highways within Davie County.
 - 7.1.2.1. The primary assignment of this 2nd Arriving apparatus and crew shall be to;
 - 7.1.2.1.1. Establish an upstream block occupying a minimum of two lanes plus the paved shoulder of the highway or blockage of three driving lanes of traffic upstream of the initial block provided by the first-due apparatus.
 - 7.1.2.1.2. The position of this apparatus shall take into consideration all factors that limit sight distance of the approaching traffic including ambient lighting conditions, weather-related conditions, road conditions, design curves, bridges, hills and over- or underpasses.
 - 7.1.2.1.3. Traffic cones and/or cones illuminated by flares should be placed upstream of the apparatus by the crew at the direction of the OIC.
 - 7.1.2.1.4. Traffic cones on limited-access, high-volume roadways shall be placed farther apart, with the last cone approximately 150 feet “upstream”, to allow adequate warning to drivers. Personnel shall place cones and flares and retrieve cones while facing the traffic.
 - 7.1.2.1.5. Assign a Flagger person to monitor the response of approaching motorists as they are directed to transition to a slower speed and taper into merged lanes of traffic.

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 10 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

7.1.2.1.6. Notify Command on the incident operating channel of any approaching traffic that is not responding to the speed changes, transition, tapering and merging directions.

7.1.2.1.7. Flagger shall activate a pre-determined audible warning to operating personnel of a non-compliant motorist approaching.

7.1.2.1.8. Driver operator of 2nd Arriving apparatus shall sound a series of long blasts on the apparatus air horn to audibly warn all operating personnel of the concern for the actions of an approaching motorist.

7.1.3. NCHP vehicles will be used to provide additional blocking of additional traffic lanes as needed. EMS Units shall always be positioned within the safe work zone.

7.1.4. Staging of additional companies off the highway may be required. Ambulances may be brought onto the highway scene one or two at a time. An adequate size multi-patient loading area must be established.

7.1.5. Command should establish a liaison with the NCHP as soon as possible to jointly coordinate a safe work zone and to determine how to most efficiently resolve the incident and establish normal traffic flows.

7.1.6. The termination of the incident must be managed with the same aggressiveness as initial actions. Crews, apparatus, and equipment must be removed from the highway promptly, to reduce exposure to moving traffic and minimize traffic congestion.

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 11 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

Officer's Safe Parking "Cue Card"

"Block" with first-arriving apparatus to protect the scene, patients, and emergency personnel.

- ❑ Block at least one additional lane
- ❑ Block so pump panel is "down stream"
- ❑ Block most critical or highest traffic volume direction first
- ❑ Consider requesting additional NCHP assistance

Crews wear proper PPE w/Helmet

- ❑ Class III vests at all times
- ❑ Helmet at all times
- ❑ Full PPE plus Class III vest between dusk and dawn or inclement weather

Establish more than adequate advance warning

- ❑ Traffic cones at 15' intervals
- ❑ Deploy minimum 5 cones upstream
- ❑ Cones only "Suggest" they don't Block!
- ❑ Expand initial safe work zone

Direct placement of ambulances

- ❑ Assure ambulances park within shadow of larger apparatus as directed
- ❑ Lane 1 is furthest right lane, next is Lane 2, then Lane 3, etc. from approaching motorist's point of view
- ❑ Direct ambulance to "block to the right" or "block to the left" to protect loading doors
 - Place ambulance patient loading area facing away from closest lane of moving traffic
- ❑ All patient loading into EMS Units is done from within a protected work zone

<p style="text-align: center;">DAVIE COUNTY, NC FIRE MARSHAL'S OFFICE STANDARD OPERATING GUIDELINES</p>	REVISION DATE 6/4/2018
<p style="text-align: center;">SUB DOCUMENT</p> <p style="text-align: center;">ROADWAY SAFETY & VEHICLE BLOCKING</p>	OPERATIONS PAGE 12 OF 12
<p style="text-align: right;">DCFM #</p>	400-003

You are the Scene Safety Officer

- ❑ Consider assigning FF as upstream “Spotter” as necessary for approaching traffic

Night or Reduced Light Conditions

- ❑ Turn OFF vehicle headlights
- ❑ Provide overall scene lighting
- ❑ All personnel in PPE w/helmets
- ❑ Illuminate cones with flares
- ❑ Consider additional Apparatus for additional upstream “Block”

Limited access, high-volume highway incidents

- ❑ Establish initial block: minimum two lanes
- ❑ Large Apparatus establishes upstream block
 - two lanes plus paved shoulder or
 - three driving lanes
- ❑ Place cones and/or cones illuminated by flares upstream of blocking apparatus
 - last cone approximately 150 feet “upstream” of apparatus
- ❑ Establish Flagger position
 - monitor approaching traffic
 - sound emergency signal as necessary
- ❑ Driver operator of blocking apparatus
 - sound a series of long blasts on apparatus air horn as necessary
- ❑ Use State Police vehicles for additional blocking
- ❑ Stage additional companies off highway
- ❑ Establish liaison with Police Department
- ❑ Terminate incident aggressively