



PALATINE

EMERGENCY MANAGEMENT AGENCY



Traffic Direction and Control

Traffic Direction and Control

Developed by Robert J. Leahy, Jr., M.S. Ed for the Palatine Emergency Management Agency, October 2011

Preface

This manual was developed as a reference for a traffic direction and control class for Palatine Emergency Management Agency (PEMA) volunteers. The volunteers of PEMA assist first responders (police, firefighters, and emergency medical services) during times of natural and man-made disasters when the extent of the disaster stretches beyond the limits of those departments and services.

The Village of Palatine has come to appreciate, and rely upon, its PEMA volunteers beyond the Community Emergency Response Team (CERT) training they received when they joined. It was decided that the volunteers could greatly assist the village's first responders in the area of traffic direction and control.

The author of this manual has 15 years of experience as a Reserve Deputy Sheriff for Lake County Illinois. One of the primary duties of the Lake County Sheriff's Reserve Deputy Unit is traffic direction and control. He drew upon his experience and training as a reserve deputy. In part from actually directing traffic, and later when he was assigned as the Training Officer and conducted traffic control classes for new recruits.

This manual was designed with a non-uniformed, non-law enforcement volunteer in mind.

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Introduction

Keeping a free and orderly traffic flow is of primary concern to any traffic enforcement agency. Among the functions of traffic control, the importance of traffic direction cannot be overemphasized. Ordinarily, traffic control devices and signals are sufficient to handle most traffic situations. Their primary function is to regulate, guide, and warn traffic along with the assignment of rights-of-way.

Occasionally, predictable and unpredictable situations occur that are disruptive to the normal traffic flow. These situations include festivals, parades, electrical failures, traffic signal failures, traffic accidents, and highway blockages. They may be weather related. Events such as these may require manual traffic direction and control.

Overview

The Palatine Emergency Management Agency (PEMA) has a program to train its volunteers in manual traffic direction and control to relieve or assist police and firefighters of those duties. This manual is part of the instructor-led and online versions of the traffic direction and control course conducted by PEMA.

This manual and the instructor-led or online course are but two of the three steps in the PEMA traffic control certification process. In addition, an experienced mentor will conduct an on-the-job (practical exercise) evaluation prior to releasing the newly trained volunteer to conduct traffic control.

Word Usage in the Manual

The uses of masculine genders of singular pronouns (he, his, himself, etc.) are for simplicity, ease of presentation, and refer to both sexes. Likewise, graphic illustrations are generic. These illustrations are to promote interest and aid comprehension for visual learners.

Responsibilities, Psychology, Clothing & Equipment of Manual Traffic Control

Topics covered in this chapter include *Responsibilities of Traffic Control*, *The Psychology of Drivers and Pedestrians* and *Proper Clothing and Equipment for Traffic Control*.

Responsibilities of Traffic Control

The traffic control officer is responsible for both vehicular and pedestrian traffic. Their responsibilities vary depending on the type of traffic encountered.

Vehicular Traffic



Vehicular traffic is the collection of vehicles, coming and going, in a particular place during a specified period.

The following are vehicular traffic responsibilities of the traffic control officer:

- Regulating the flow of traffic
- Controlling and assisting turning traffic
- Coordinating with adjacent intersections
- Assisting emergency vehicles
- Assisting drivers seeking information

Pedestrian Traffic



Pedestrian traffic is the collection of people, coming and going, in a particular place during a specified period.

The following are vehicular pedestrian responsibilities of the traffic control officer:

- Protecting pedestrians
- Assisting pedestrians at crosswalks
- Assisting pedestrians seeking information

The Psychology of Drivers and Pedestrians



It is beyond this manual to explain why there are, or what causes, differences in the attitudes of drivers and pedestrians towards road safety, the risks in driving, accident causes and personal safety. However, you need to be aware of situations you will encounter and some of the reasons why this will happen.

The Distracted Driver and Pedestrian



The primary concern of drivers and pedestrians should be paying attention when driving or walking. As the traffic control officer, you need to realize or assume that some drivers or pedestrians will not see you because:

- They are texting, phoning or using their laptop computers
- They are playing with the radio or listening to their iPods
- They are eating, shaving, or putting on makeup
- They are daydreaming or may be falling asleep
- They are gapers, gawkers, busybodies, lookie loos, etc.
- They are distracted by passengers or children in their car

The Confused Driver and Pedestrian



Drivers and pedestrians come from all walks of society. As the traffic control officer, you need to realize or assume that some drivers or pedestrians will not understand you because:

- They may be confused by your gestures or signals
- They may be young or inexperienced drivers
- They may not understand verbal commands (e.g. don't speak or understand English)
- They may be hearing impaired
- They may be lost
- They may be intoxicated or under the influence of drugs or medications

The Disobedient Driver and Pedestrian



In a perfect world, drivers and pedestrians would follow the directions of the traffic control officer. However, this is not always the case. As the traffic control officer, you need to realize or assume that some drivers or pedestrians will not do what you want them to do because:

- They did not see you (they were distracted or not paying attention)
- They will not want to go the direction you need to send them
- They all have a reason or excuse why they can't listen to you
- They all know "someone" and will have your job

The Inquisitive Driver and Pedestrian



As the traffic control officer, you need to realize or assume that some drivers or pedestrians will ask questions if given the chance. They may think you have all their answers. Some of their questions even border on the ridiculous.

- "How do I get to... (wherever they want to go)?"
- "When will the carnival start up after the storm?"
- "What caused the... (fire, accident, flood, etc.)?"
- "Do you know officer... (someone they know)?"
- "Why did the mayor allow the parade on my street?"

The Unpredictable Driver and Pedestrian



It would be great if we could rely on drivers and pedestrians to follow instructions in a peaceful and respectful manner. As the traffic control officer, you need to realize or assume that some drivers or pedestrians:

- Will creep up on you, after you have stopped them, when you look away
- Will try and go around you even if you have the road blocked
- May do what they want in spite of what you have directed
- Will honk their horn at you...or worse

Proper Clothing and Equipment for Traffic Control

Something to remember is that you are representing the municipality or agency you are supporting when you are conducting traffic control. This is true even if you are a volunteer and uniforms are not provided. In most cases, drivers and pedestrians will not even know that you are a volunteer, and may even assume you are a member of law enforcement. Many do not have any idea of what an Emergency Management Agency (EMA) is or does.

There is a proper way to dress when you are conducting traffic control. Safety is most important. However, you need to be comfortable and present a professional image.

As a Palatine Emergency Management Agency (PEMA) volunteer, you are not required, or issued, a uniform such as the ones worn by local law enforcement or traffic aides found in some cities. The following are the clothing and equipment requirements for PEMA volunteers performing traffic control duties.

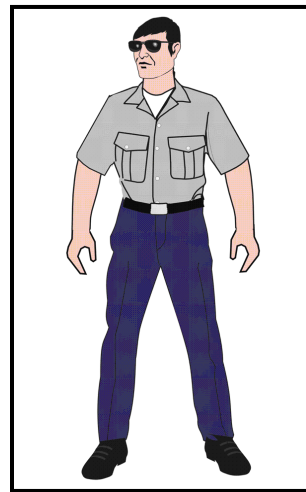


Figure 1: Volunteer Traffic Control Officer

Proper Clothing

As a volunteer, you will be wearing your own clothes to conduct traffic control, but some of the items found in your dressers and closets may not be appropriate. You need to dress for safety, comfort and to present a professional image. Drivers and pedestrians will take you seriously when you look the part. The following are examples of what is appropriate or inappropriate clothing to wear for traffic control:

- Short or long sleeved shirts with the official Palatine Emergency Management Agency logo.
- You can wear other shirts, but they are to be without logos or pictures. Beer brand, company or sport team logos, slogans, political or religious identification, jokes, and names of other departments or agencies may be considered unprofessional, false advertising or just in poor taste.
- Wear long ankle length pants. No shorts, skirts, spandex, cropped pants, etc. Exposed legs can be a safety concern. Dress for safety and comfort, and not for fashion.
- Wear jackets, rain gear, and gloves, as the weather requires.



Figure 2: Proper and improper clothing for traffic control

Proper Footwear

There are many types of footwear, and a lot of them are not suitable for directing traffic. Again, the primary concern is safety and comfort, and not fashion. The following are examples of what is appropriate or inappropriate footwear to for traffic control:

- Boots, work shoes, athletic shoes that are good for standing for long periods and various road conditions
- Footwear for bad weather such as snow boots or rain boots
- No sandals, flip-flops, open toed shoes, high heels, etc.



Figure 3: Proper and improper footwear for traffic control

Proper Headgear

Wearing headgear, while conducting traffic control, is optional. The reasons for wearing headgear includes keeping the sun out of your eyes, keeping your head warm, protecting your head and even to make you look taller. The following are examples of what is appropriate or inappropriate headgear to wear for traffic control:

- Headgear that is suitable for the weather.
- Palatine Emergency Management Agency (PEMA) or plain ball caps, knit or wool caps, winter storm hats, etc.
- No other logos or pictures are to be on the headgear. Beer brand, company or sport team logos, slogans, political or religious

identification, jokes, and names of other departments or agencies may be considered unprofessional, false advertising or just in poor taste.



Figure 4: Proper and improper headgear for traffic control

Clothing Summary

The overall principle is to look as professional as possible while keeping in mind safety and comfort.

- Long pants aid in preventing injury to legs while on the road
- Shirt, jacket, rain gear, gloves appropriate for weather conditions
- Footwear is for safety and comfort, not fashion
- Headgear is for safety and the weather
- No “false advertising” on any of the clothing

Proper Equipment

On November 24, 2008, federal regulation 23 CFR 634 went into effect mandating that anyone working in the right-of-way of a federal-aid highway must be wearing high-visibility clothing that meets the requirements of ANSI / ISEA 107; 2004 edition class 2 (II) or 3 (III). This requirement applies to all emergency responders and includes PEMA volunteers.



Figure 5: Examples of high visibility clothing

Safety Vests

Workers in high traffic areas, with speeds below 25 miles per hour, are to wear a Class 2 (II) vest. These vests must be orange, yellow or lime green. Class 3 (III) ANSI vests are for high speed, high traffic areas. These are also required to be orange, yellow or lime green for enhanced daytime visibility. These vests also feature white or silver reflective material for better visibility at night.

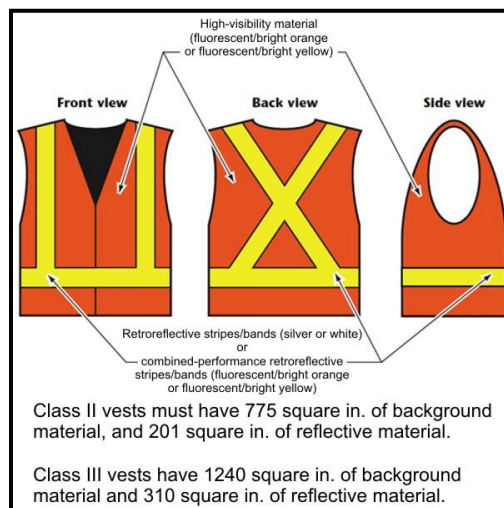


Figure 6: Class II and III vest specifications

Class III safety vests or jackets are required for all PEMA volunteers directing traffic.

- Wear a plain (no logo) or official Palatine Emergency Management Agency (PEMA) yellow Class III safety vest or jacket.
- No green Community Emergency Response Team (CERT), blue Palatine Medical Reserve Corps (PMRC), or other vests or jackets from other agencies you may have been issued or own.
- When are you supposed to wear the vest? “If your feet are on the street, the vest is on your chest!”



Figure 7: Class III jacket and vest (PEMA lettering on back)

Additional Equipment

There is other equipment needed to conduct traffic control in addition to the safety vest or jacket.

Traffic Whistle

Traffic whistles are aids to use when directing traffic in addition to arm and hand gestures (see Whistle Signals on page 23 for more information). The recommended traffic whistle is a metal or plastic “sports” type whistle. A rubber tip should be used on a metal whistles

and is highly recommended. It is easier to grip and it helps to prevent injury to your teeth. You should use a lanyard or cord on the whistle to keep around your neck. This helps in case you should drop your whistle.

Traffic Wands

Traffic wands or flashlights with traffic cones are aids to use when directing traffic (see Traffic Wands and Flashlights on page 24). They are used to aid in traffic control during times of limited visibility. You may use either traffic wands or flashlights with traffic cones; however, they must be a matched set (no mixing of wands and cones). Only red wands or cones are used. No other color authorized.



Figure 8: Additional traffic control equipment

Elements of Effective Traffic Control

Traffic control is much more than putting someone in the appropriate clothing and equipment. Traffic control officers need a basic understanding of the subjects related to traffic control that are necessary for effective traffic control. Topics covered in this chapter include:

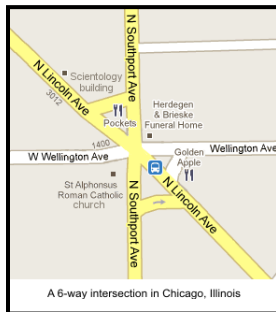
- *Intersection Confusion*
- *What is an Intersection*
- *Intersection Types and Examples*
- *Intersection Control*
- *General Rules for Intersection Control*
- *Regulating Traffic Patterns*
- *Directing Traffic by Signals and Gestures*
- *Signaling Aids*
- *Position in the Roadway*
- *Directing Traffic by Other Means*

Intersection Confusion



As a driver or passenger, you probably have noticed there are a wide variety of intersections... and some can be quite confusing. The following will help clear up some of the questions you may have.

What is an Intersection



In the field of road transportation, an intersection is a junction where two or more roads either meet or cross at the same level. Bridges crossing over, or tunnels crossing under, roads are not intersections.

Classifications of intersections are 3-way, 4-way, 5-way, 6-way, etc. depending on the number of roads that come together at the intersection.

Intersection Types and Examples

There are three main types of intersections and many different examples that you may encounter.

Controlled Intersection

A controlled intersection (see Figure 9) is one that is normally regulated by a traffic sign or electronic signaling device.



Figure 9: Controlled intersection

Uncontrolled Intersection

An uncontrolled intersection (see Figure 10) is one that is not normally regulated by a traffic sign or electronic signaling device. Intersections of this type are typically found in suburban neighborhoods or in rural settings.



Figure 10: Uncontrolled intersection

Irregular Intersections

Irregular intersections (see Figure 11) may be controlled, uncontrolled, or a combination. They include multilane intersections, divided highway intersections, “T” intersections, “Y” intersections, offset intersections, and anything other than a traditional crossroads (+) intersection.



Figure 11: Irregular intersection

Intersection Examples

The traffic signs in Figure 12 show a few of the different examples of intersections drivers and traffic control officers may encounter. These are some of the more common examples. However, intersections can have more than two or three roads meeting at one point.

Signs found in the Manual on Uniform Traffic Control Devices, 2009 Edition

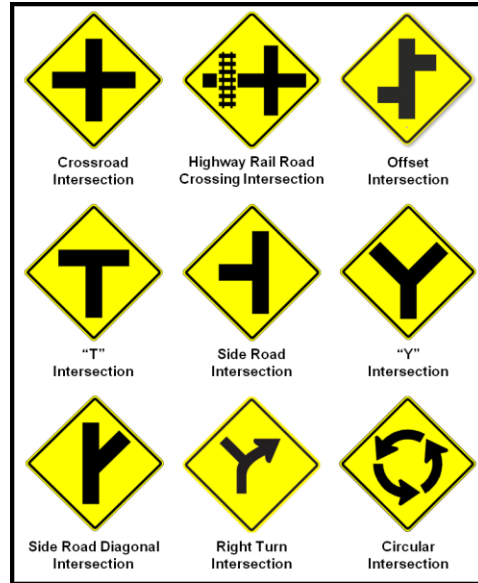


Figure 12: Intersection signs

Intersection Control

The responsibility of the traffic control officer is to regulate crossing traffic. He should determine whether east-west or north-south traffic will move and for how long a period without interruption.



The traffic control officer accomplishes intersection control by:

- Controlling turning movements
- Coordinating vehicle movement at the intersection with nearby intersections
- Detouring traffic when necessary
- Supervising signal obedience and, if necessary, directing traffic to disregard the signals



The traffic control officer accomplishes intersection control by:

- Protecting pedestrians and preventing them from illegally crossing the road
- Preventing illegal parking and vehicles from stopping at locations that will interfere with traffic movements

- Providing for the safe passage of emergency vehicles
- Assisting persons seeking information or assistance when time permits



If more than one officer is used to control an intersection:

- The center man is in charge and controls the traffic
- The wingman or wingmen echo the center man's commands when instructed to do so

General Rules for Intersection Control

A list of general rules for smooth operation during intersection control includes:

- Use uniform signals and gestures
- Try to break traffic at natural gaps whenever possible
- In the absence of normal breaks, try to break the line behind slow-moving vehicles such as large trucks
- Keep stragglers and daydreamers alert, rolling, and in their proper lane
- Do not get excited
- Do not leave a position just to bawl or chew-out a driver
- Look cheerful. Be cheerful, but firm

Regulating Traffic Patterns

“If it ain't broke, don't fix it!” Traffic can be overregulated. Needless directions or interference by a traffic control officer will cause motorists to wait for instructions and cause further delays.

Intersections with Non-Functioning Signals

At intersections with traffic signals, you should direct traffic in a manner that is familiar to drivers. This means that at a particular

intersection, your traffic direction should follow the same order as the traffic signal. This is true whether signals are functioning or not.

For instance, a signal normally assigns the right-of-way to the left turner in left turn lanes first. When the turning vehicles have cleared the intersection, allow the straight through traffic coming from the same direction to go. If this is the order, then this is the way you should direct traffic.

The reason for following normal patterns is that drivers are prone to follow patterns with which they are familiar. Directing them in familiar paths eases the communication process.

Typically, the traffic stream has a high concentration of repeat travelers and the ease in which they follow a traffic control officer's direction helps minimize traffic conflicts. In addition, no decision is necessary on the traffic control officer's part as to how he will assign the right-of-way. If he knows the intersection and the signal sequence, he simply follows the sequence.

Intersections with Functioning Signals

A traffic control officer may on occasion direct traffic in conjunction with a functioning signal. The traffic situation is such that the signal is not adequate to control traffic by itself. This may be a high volume traffic situation with frequent demands for left turns and few turning opportunities. In most cases, the signal will do most of the work. However, action on the traffic control officer's part will be required from time to time. With functioning signals, the traffic control officer will have more time to be alert for signs of possible traffic jamming. At the same time, he must anticipate signal changes.

Preventing Intersection Blockages

Traffic control officers must watch all exits of the intersection. If the intersection starts to fill up, he must try to prevent complete blockage. The traffic control officer should check the traffic stream and allow cross traffic to cross when practical. He can anticipate congestion and attempt to prevent vehicles from entering the intersection unless they have ample exit space.

The traffic control officer must be alert for blockage between intersections. Double parking, unauthorized loading and minor accidents may be the cause for blockage. He determines the reason for mid-block horn blowing and, if necessary, leaves his post and clears the obstruction.

The traffic control officer can prevent tie-ups by making certain that motorist trying to make left turns do not hold one or more lanes of traffic up. He may have to use “no turn” signs or resort to detours.

Directing Traffic by Signals and Gestures



When a traffic control officer has to direct traffic, it is his job to tell people how, when and where they may move in vehicles or on foot. The traffic control officer must pay attention to cars, pedestrians, and bicyclists and see to it that they are given a chance to proceed. There is a natural tendency to overlook pedestrians and bicyclists.

Actually what the traffic control officer does is tell drivers and pedestrians how to behave. If he were not on hand to make decisions and direct movements when traffic is heavy, some drivers and pedestrians would foolishly try to move at every chance. This causes repeated traffic jams. Without realizing it, motorists could also get into dangerous situations that they did not anticipate.



The traffic control officer's most important job while directing traffic is to let drivers and pedestrians know what he wants them to do. If they do not understand him, he will have trouble and so will they. The instructions found in this manual were developed to improve the communication process between the traffic control officer and the highway user. It shows the traffic control officer how to make his meaning clear to the drivers and pedestrians.

Drivers are not often able to can hear a traffic control officer when he wants them to respond, so he cannot just talk to them. He has to use a type of sign language that is clearly understood by everyone. Suppose that he does it in a way that is entirely his own and different from all others who direct traffic. Perhaps some of the drivers approaching the traffic control officer's corner would catch on, but most of them would be puzzled. Since they have never come across such motions before, they would probably fail completely to understand the directions and ignore or misinterpret the traffic control officer.



Therefore, it is important that traffic control officers to do it the same way. Equally important, the gestures should be made where the driver can see them from a reasonable distance.

When directing traffic by hand, traffic control officers must let people know that they are in charge. To project this image the traffic control officers must stand where they can be seen and as though they are serious.

The Stance

To fight fatigue, and be able to stand for long periods, the traffic control officer should stand straight with weight distributed equally on each foot. The knees should not be “locked.” When not signaling, your hands should hang easily at the side. If you find yourself fidgeting (nervously waving or moving your hands), a modified military “parade rest” stance, with your hands behind your back, will give a professional image.

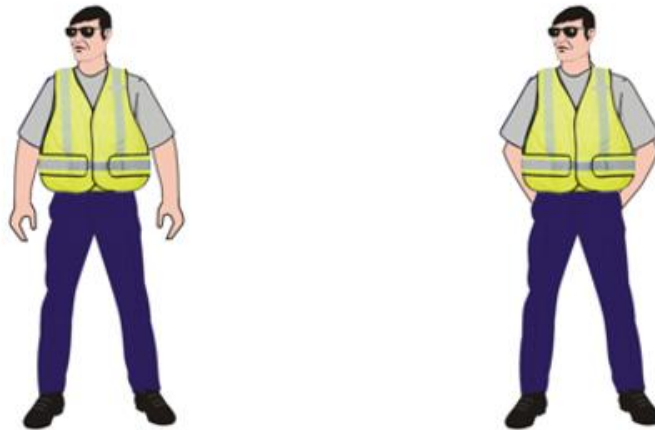


Figure 13: Stance with arms at side and behind back

The traffic control officer normally should not directly face vehicles he has authorized to move, but instead stands with his side towards them. This stance conveys a message that tends to be less disruptive of normal traffic movement and provides a smaller “target” to oncoming traffic.

Hand Signals

Drivers are not often where they can hear a traffic control officer. Their windows are up and the heater or air conditioning may be on. They may also have their radio playing. The traffic control officer has to use a type of sign language that most everyone can understand.

Stopping Traffic

The giving of the right-of-way to cross traffic (from the left or right) is accomplished by first stopping the through traffic (front or rear). To stop traffic:

- 1 Look straight at the driver you want to stop (see Figure 14).

- 2 Extend an arm.
- 3 Point your index finger at the driver. Hold this position until the driver sees you.
- 4 With your arm extended, show the palm of your hand toward the driver until he stops.
- 5 If the driver stops too far away from your position, motion them to come forward and point to where you want them to stop.

When traffic is flowing in both directions, stop one side first (see Figure 14) and then the other (see Figure 15). You should not lower either hand until both directions stop.

Warning: Never try to stop two directions at the same time. This may confuse drivers and lead to accidents.

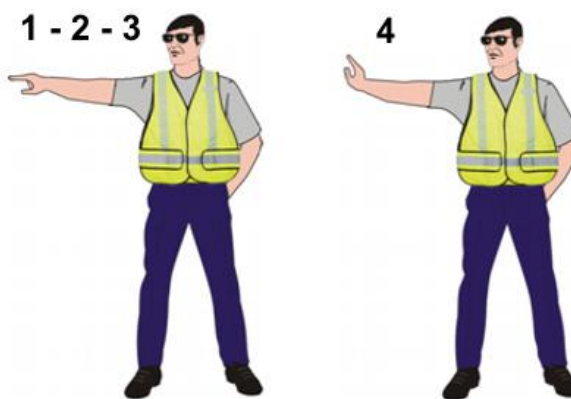


Figure 14: Stopping traffic on one side

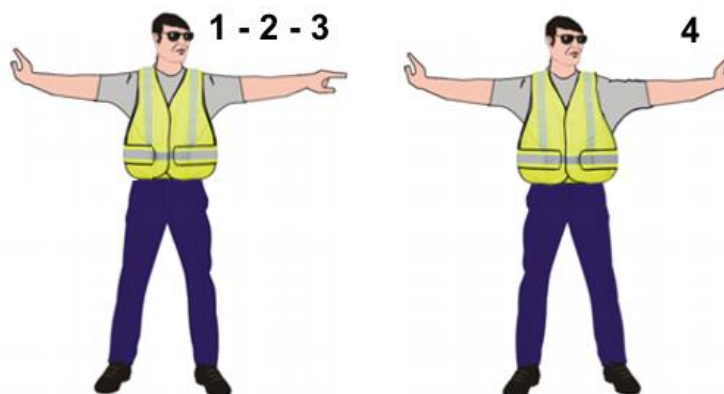


Figure 15: Stopping traffic from opposite direction

Starting Traffic

You must decide which side of the traffic is to be started first:

- 1 Look straight at the driver you want to start (see Figure 16).
- 2 Extend an arm.
- 3 Point your index finger toward the car he wants to proceed.
- 4 After gaining the driver's attention, with the palm of your hand facing upward, swing your hand up and over to the chin.
- 5 Repeat this waving motion to keep traffic moving.
- 6 You may use your other arm to point to the direction where you want the traffic to move.

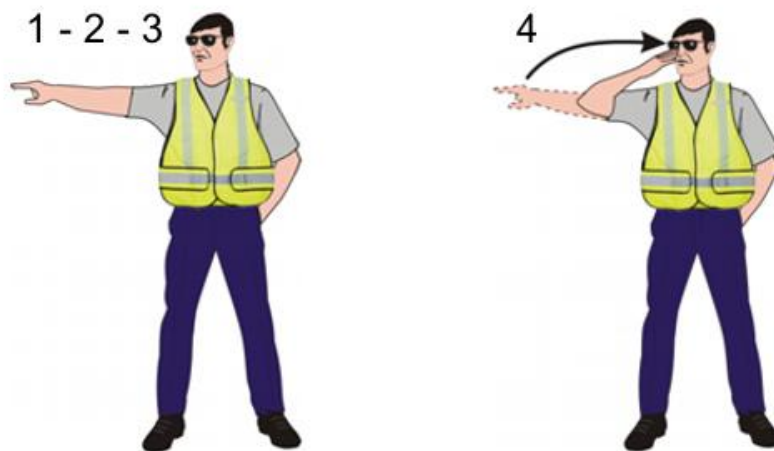


Figure 16: Starting traffic

Warning: Never try to start two directions at the same time. This may confuse drivers and could lead to accidents.

Right Turn

Right turns (the driver's right) require the least direction and signaling. The arm you signal with will be determined by the car's direction and your position at the time it approaches. When a vehicle is approaching from the right, you point toward the driver with your right arm, and then swing your arm toward the direction of the intended turn (see Figure 17).

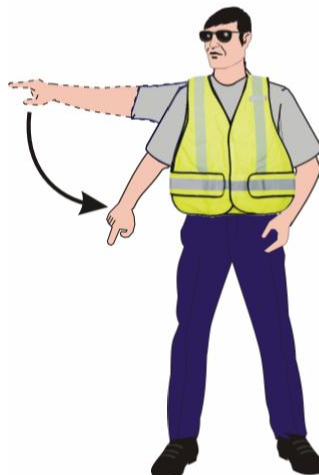


Figure 17: Right turn

Left Turn

Left turns (the driver's left) require more effort on your part. You must be constantly aware of opposing traffic. When appropriate, you halt opposing traffic with the right hand (following the stopping traffic procedures) and hold it (see Figure 18). Then with the left hand, you point to the driver desiring to turn left and give the signal to turn.

Positioning of left turning vehicles is important, especially when cars are holding up traffic while waiting for an opportunity to turn (when no left turn lane available). You point to a spot on the highway near you where a car can wait, thus clearing the traffic lane for through traffic. This procedure works best when only one car is trying to turn left. When a larger number are present, there may be a need to assign the right-of-way to the left turning vehicles.



Figure 18: Left turn

Two or more Officers Signaling

There can be a need for more than one traffic control officer to control the situation when large traffic problems exist. When two or more officers are working together at one location, one of the traffic control officers must originate all signals and gestures. This is generally the center man (the explanation is later in the manual). The reason for this is obvious. When two different officers originate signals, conflicts will occur.

The result could be total confusion rather than a smooth operation and may possibly cause accidents. One officer should always be in charge. It would be wise to assign responsibilities with regard to who will be responsible.

For example, one officer should direct all north and westbound traffic including turning movements, and the other all south and eastbound traffic including turning movements.

Signaling Aids

Signaling aids are things that used along with hand gestures in order for the traffic control officer to get his message across to the driver. These aids may be used during normal traffic direction situations. They are also used during situations when natural and man-made obstacles are present (e.g. rain, fog, loud construction noises, etc.) Signaling aids consist of whistles, traffic wands, and voices.

Whistle Signals



Use whistle signals, along with hand signals, and make sharp and distinct sounds. Use the traffic whistle and blow:

- One long blast to stop traffic when your palm is facing the driver or you are waving your traffic wands in the stopping motion (see Stopping Traffic with Traffic Wands on page 24)
- Two short blasts to start traffic when you point your finger at the driver to go
- Several short blasts to gain the attention of drivers, pedestrians or other traffic control officers to gain their attention or alert them to an emergency

Traffic Wands and Flashlights



Traffic wands, or flashlights with traffic direction cones, aid the traffic control officer in times of fog, rain or darkness. They allow the drivers to see the traffic control officer's hand gestures during low visibility periods.

The main purpose is to attract the attention of drivers. Then they are used for directional purposes.

Warning: Waving a wand too quickly may confuse drivers or may not give enough time for the driver to see your motions

Stopping Traffic with Traffic Wands

When stopping traffic at times of low visibility with traffic wands, you should:

- 1 Start with the traffic wands at your sides (see Figure 20).
- 2 Use an exaggerated crossing (X) motion above your head.
- 3 Keep waving the traffic wands in the X motion until you think you have the driver's attention.
- 4 Bring the "X" down in front of your chest once you get the driver's attention and the driver stops (see Figure 20: Stopping traffic with traffic wands (continued)).

Warning: Do not block your vision by holding the "X" in front of your face.

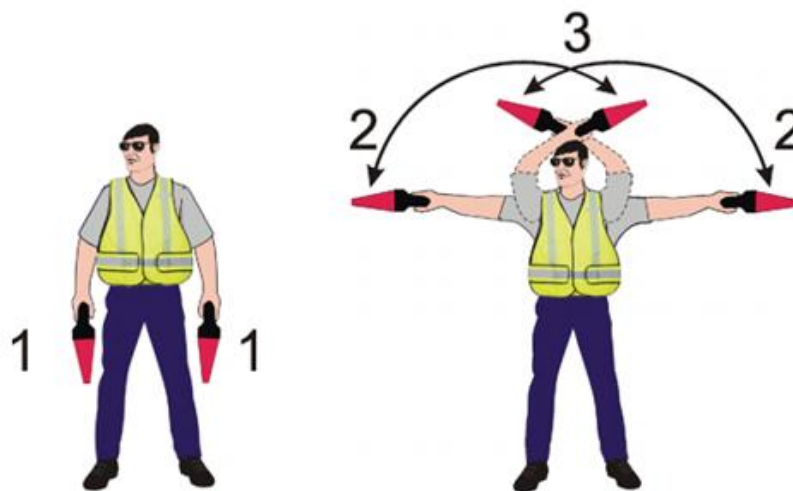


Figure 19: Stopping traffic with traffic wands



Figure 20: Stopping traffic with traffic wands (continued)

Starting Traffic with Traffic Wands

You must decide which direction of the traffic you want to start first:

- 1 Look straight at the driver you want to start (see Figure 21).
- 2 Extend an arm.
- 3 Point your traffic wand toward the car you want to proceed.

Warning: Do not point at the drivers eyes. You may temporarily blind them or disrupt their night-vision.

- 4 After gaining the driver's attention, swing your traffic wand up and over to your chin.

Warning: Do not block your vision by holding the traffic wand in front of your eyes. You may temporarily blind yourself or disrupt your night-vision.

- 5 Repeat this waving motion to keep traffic moving.
- 6 You may use your other arm and traffic wand to point to the direction where you want the traffic to move.

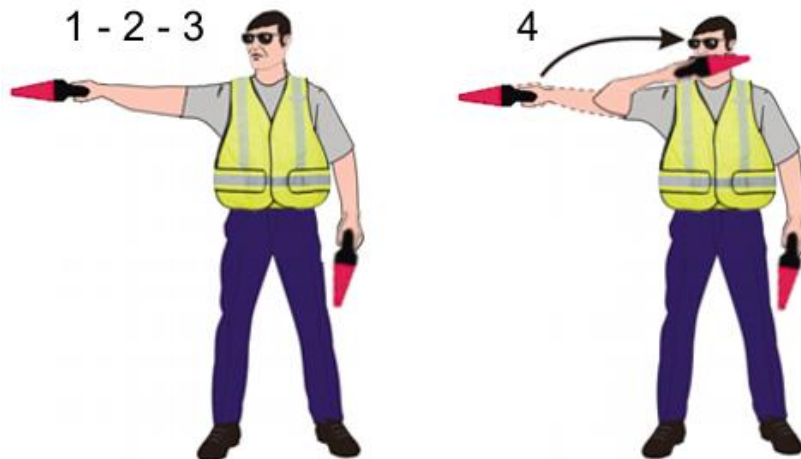


Figure 21: Starting traffic with traffic wand

Verbal Signals



Traffic control officers should not normally use their voice in directing traffic. Arm gestures and the whistle are usually sufficient. Verbal orders are not easy to give or to understand. However, some talking may be necessary, and if used, the traffic control officer must be polite and brief. Simple and to the point statements are necessary.

Avoid conversations unless time permits brief explanations to insistent motorists. If not, have the driver move safely off the road and summon another traffic control officer to assist the driver.

Position in the Roadway

Positioning at intersections is important for efficient and safe traffic control. As stated earlier, the traffic control officer should stand where the driver can see him. Not all intersections are the same and he must make adjustments depending on the situation. Some common positions for the traffic control officer are:

- The center of the intersection with one traffic control officer
- The center of the intersection with three traffic control officers
- The center of the intersection with five traffic control officers
- The center entrance to the intersection with one traffic control officer

Center Position (One Person)

This is the most common intersection. The traffic control officer places himself in the center of the intersection and turns to face the traffic he will signal (see Figure 22).

Warning: Your back will be towards one direction of traffic. Always remember to be aware of the traffic situation and constantly look forward, backward, left and right.

When starting or stopping traffic, you must always work with one direction at a time.

Warning: Never try to start or stop two directions at the same time. This may confuse drivers and could lead to accidents.

For example, first stop the eastbound traffic, and then the westbound traffic. Depending on the traffic situation, turn and start either the northbound or the southbound traffic. Once that direction is started, turn and start the other.

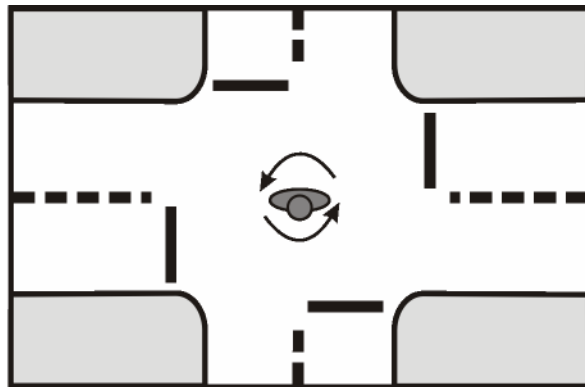


Figure 22: Center position (one person)

Center Position (Three Person)

In this example, there is a “T” intersection with multiple lanes. One traffic control officer may be able to handle it, but that is not always the case. Here there are three traffic control officers (see Figure 23). The center man is in charge and determines the flow of traffic. The wingmen follow the directions of the center man and echo his commands. They do this by occasionally looking over their shoulders to see what the center man is doing.

Note: The center man always faces the direction he is giving a command. Do not give commands over-the-shoulder.

The center man always makes sure traffic is stopped to his left and right before signaling to start the lane directly in front of him. He does this by first stopping traffic in one direction (either left or right as the traffic flow may dictate). The wingman in that direction echoes this command. Once this direction of traffic has stopped, the center man stops the traffic from the other direction and that wingman echoes that command. Once the traffic from the left and right are stopped, the center man then can start the traffic in front of him.

Warning: Your back will be towards one direction of turning traffic. Always remember to be aware of the traffic situation and constantly look forward, backward, left and right.

Make adjustments to allow right-turning and left-turning traffic. This may require that you stop two of the three directions of traffic depending on which lane is turning.

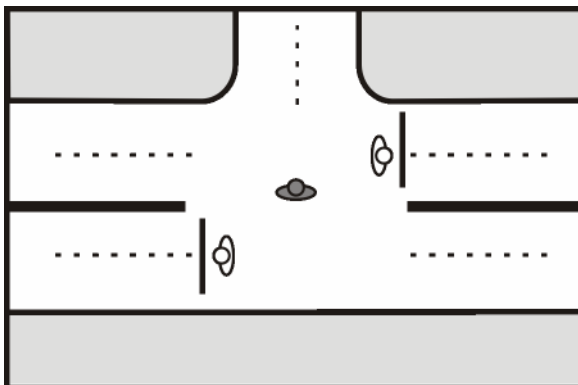


Figure 23: Center position (three persons)

Center Position (Five Person)

This is an example of a very busy, or possibly dangerous, intersection where it is determined to use the maximum traffic control personnel possible (see Figure 24). The actions of the center man are the same as in the three-person intersection except that there are now four directions and four wingmen. The wingmen follow the directions of the center man and echo his commands. They do this by occasionally looking over their shoulders to see what the center man is doing.

Warning: Your back will be towards one direction of traffic. Always remember to be aware of the traffic situation and constantly look forward, backward, left and right.

Make adjustments to allow right-turning and left-turning traffic. This may require that you stop three of the four directions of traffic depending on which lane is turning.

The center man always makes sure traffic is stopped to his left and right before signaling to start the lane directly in front or rear of him. He does this by first stopping traffic in one direction (either left or right as the traffic flow may dictate). The wingman in that direction echoes this command. Once this direction of traffic has stopped, the center man stops the traffic from the other direction and that wingman echoes that command. Once the traffic from the left and right are stopped, the center man then can start the traffic in front of him and then the traffic behind him.

Note: The center man always faces the direction he is giving a command. Do not give commands over-the-shoulder.

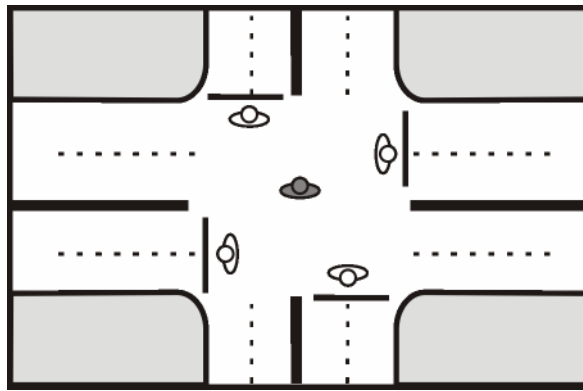


Figure 24: Center position (five persons)

Center Entrance Position (One Person)

In this example, we have a four-way intersection, however the same procedures apply to a three-way intersection. In this situation, we are controlling the entrance (and maybe the exit) of one of the directions (see Figure 25). Standing as shown generally gives the impression to the drivers that you are controlling that one side of the intersection rather than all four.

Warning: Your back will be towards one direction of traffic. Always remember to be aware of the traffic situation and constantly look forward, backward, left and right.

Conduct traffic control as you would do for any intersection but keeping in mind the specific instructions given to you prior to taking your position. An example is that you cannot allow traffic in the westbound direction due to an accident. In this case, you must direct the westbound traffic in front of you to either go north or south. Depending on the situation, you may need to send the traffic in one of

the directions regardless of which direction they want to go. Be ready for a very angry driver.

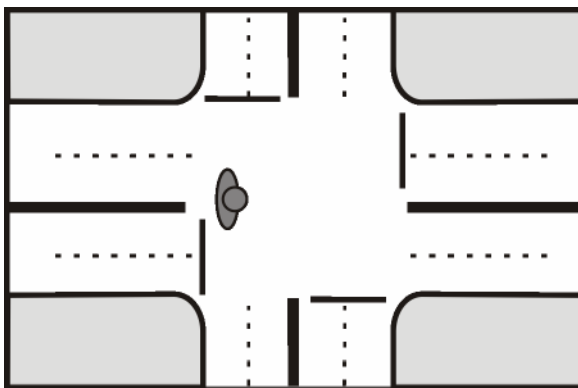


Figure 25: Center entrance position (one person)

Directing Traffic by Other Means

Traffic control officers may work alongside with other means of traffic control. You may or may not have to them set up, but they may be on or near your assigned position. Other traffic control means include:

- Flares (see Annex A - Use of Flares and Flare Patterns)
- Barricades
- Traffic Cones
- Police Tape
- Official Vehicles (police, fire, public works, or PEMA)

Warning: You are never to direct traffic by using flares in your hands or using your personal vehicle to block or direct traffic!

- Sparks from flares can cause serious damage and injury to you and those around you
- Use of your personal vehicle is not authorize or insured by the village
- You would be personally liable or responsible for any damages caused by or to your vehicle
- Your personal auto insurance will not cover such usage of your vehicle

General Rules for Manual Traffic Direction

The Four “Cs” of Traffic Control

The four “Cs” of traffic control are what every traffic control officer should demonstrate. This is whether he is actively directing traffic, just arriving, or leaving an assignment.

Confident

You have assurance, freedom from doubt, and belief in yourself and your abilities. You know what you are doing and you do not show nervousness.

Commanding

You are indicating or expressing authority. You are in charge of traffic control and it is your job to direct drivers and pedestrians for their safety and security.



Clear

You are easy to perceive, understand, or interpret. Your signals, gestures and verbal commands are consistent and proper.

Courteous

You are polite, respectful, or considerate in manner. This is true even if the driver or pedestrian is not extending the same to you.

Safety



The top three things that are to be on the mind of every traffic control officer are:

- Your personal safety
- Pedestrian safety
- Traffic safety

Your personal safety

- Watch out and keep looking in all directions
- Do not back yourself into a lane
- When in doubt, safely stop all traffic
- Stop all traffic when being relieved or relieving a wingman in an intersection

Pedestrian safety



- Make sure traffic is stopped before allowing pedestrians to cross
- Don't assume pedestrians will follow your instructions exactly
- Watch for stragglers, children and elderly pedestrians

Traffic safety

- Watch out and keep looking in all directions
- Look down the road and not just the intersections
- Watch for, and give priority to, emergency vehicles (police, fire and medical)
- When in doubt, safely stop all traffic

Use Common Sense

You have an assignment and may have instructions of how to handle it, but ultimately you are in control of the situation.

“If it ain't broke, don't fix it!”



If traffic is flowing normally or naturally, you can actually cause more problems by being in the intersection. This is true if the traffic signal or sign is effectively controlling traffic.

In that case, get out of the intersection. Only get back into the intersection when the traffic signal or sign cannot control traffic effectively.

Keeping stragglers alert and moving in their proper lanes

Drivers and pedestrians do not always pay attention. Keep them moving when appropriate. Stragglers can make traffic conditions worse.

Take appropriate action during back-ups



It would be nice to give all directions of traffic the same amount of time. However sometimes one direction may have the brunt of the problem. In this case, it may be appropriate to give them more time than the other directions.

Use proper etiquette

One of the four “Cs” of traffic control is “courteous.” The Golden Rule is “Do not do to others that which we do not want them to do to us.”

Treat drivers and pedestrians politely, respectfully, and in a considerate manner. This is professionalism. Hopefully, they will be courteous in return.

What If Something Happens

Even the most experienced traffic control officers have something unexpected happen during their assignments. It can be an irate driver or pedestrian. A driver does not pay attention or fails to follow your instructions, and an accident happens. In any case, something unrelated to your original assignment is now affecting traffic.

What do you do?

Stop all Traffic if Necessary

When in doubt, stop all directions of traffic as quickly and safely as possible. Do not contribute negatively to the situation.

Alert or Call for Police, Fire and Medical



Once you have traffic safely stopped, you should call for emergency assistance for:

- Vehicle accidents or property damage
- Injured occupants or pedestrians
- Uncooperative drivers or pedestrians
- Reckless drivers or suspected driving under the influence (DUI) drivers

You are not Law Enforcement



You are a representative of PEMA, and supporting the Palatine Police or Fire departments, but you are not law enforcement.

- You cannot hold or restrain anybody (you have no powers of arrest or to detain someone)
- Remember information to give law enforcement (car make and model, license plate, occupant descriptions, etc.)
- Give information to, and be prepared to be interviewed by, law enforcement

What to say to the Media if Approached



Be aware that media (TV stations, newspapers, independent reporters, etc.) may show up at any time. They may even portray themselves as locals or neighbors. Remember, you are not an official spokesperson. Whatever you say can end up in the news. This could be embarrassing to you, the department, and the village. If approached, you should:

- Be polite
- Direct them to the Incident Commander (IC) or Public Information Officer (PIO)
- Not release any information or details
- Remember, there is no such thing as “off the record”

Reporters have been known to keep cameras and recorders running even after they claim they have been turned off.

Even if you are approached by true locals or neighbors, do not give them any information. What you tell them can just as easily end up in the news. Moreover, it can come back to haunt you.

Summary

In this manual, traffic direction was approached on a practical basis rather than a theoretical one. We stressed the importance of using uniform signals and gestures for starting, stopping and turning traffic. The use of signaling aids such as the voice, whistle and traffic wands was explained along with their relative benefits and limitations.

Intersection control can be simple or complex depending upon the intersection type, location, and traffic. The traffic control officer should be aware of his important responsibilities associated with intersection control and important traffic variables. Control is exercised when the traffic control officer follows traffic signal sequences at signalized intersections and takes the proper position within an intersection.

Although accidents are not the only events requiring flare patterns to warn oncoming traffic, they are the most prevalent. A traffic control officer at the accident scene should establish priorities so that he is able to handle emergencies.

Traffic control officers should understand the proper placement and alignment of flares. Aids for establishing flare distance requirements, such as the stopping distance chart, are in Annex A - Use of Flares and Flare Patterns in this manual as well as a method for computing thinking distance or reaction distance.

Be Safe – Be Prepared



Palatine Emergency Management Agency
200 East Wood Street | Palatine, IL 60067

Annex A - Use of Flares and Flare Patterns

Highway flares (Fusees) are used to temporarily control traffic for a relatively short period until the situation requiring their use can be corrected or until other devices have been installed and maintained by the appropriate agency responsible for maintaining that particular road or highway. Of the many events requiring the warning of oncoming traffic, the most predominant is the traffic accident.

Warning: At no time should the traffic control officer use a flare as a handheld signal device. Serious bodily harm as well as damage to equipment and clothing can result.

Hazards Associated with Flares

The greatest danger associated with the use of flares occurs during the lighting process. Observe simple safety rules:

- Determine if there is a fire danger before lighting flares such as leaking gasoline, butane, and other flammable substances
- Turn head and eyes away before striking because flares have a tendency to pop when struck
- Keep flares away from your body by extending your arm. Dripping molten material can cause serious burns
- Stand upwind from flares and hold them downward when placing them in the roadway. The toxic fumes being emitted can be harmful if breathed for prolonged periods
- To put out the flare, grasp the flare by the end away from the flame and gently tap the burning end on the pavement. Snuff out the flame when the flare is no longer needed
- When placing flares at an accident scene, always walk toward oncoming traffic
- Do not use the flares to direct traffic. Night blindness and the burning of the skin or clothing can occur

Techniques for Lighting Flares

Waxed sealed cap type

- 1** Pull black tab to break the seal and to expose the striking surface on the cap.
- 2** Twist the cap off and remove to expose the igniting device of the flare.
- 3** Point the flare down and away from your body.
- 4** Hold the cap with striking surface in the weak (support) hand and the flare in the strong hand.
- 5** Strike the striking surface of the cap downward and away from your body by moving the flare with your strong hand.



Figure 26: Waxed sealed cap type road flare

Plastic cap type

- 1** Twist the cap off and remove to expose the igniting device.
- 2** Remove the small cover from the cap to expose the striking surface of the cap.
- 3** Point the flare down and away from your body.

- 4 Hold cap with striking surface in the weak (support) hand and the flare in the strong hand.
- 5 Strike the striking surface of the cap downward and away from your body by moving the flare with your strong hand.



Figure 27: Plastic cap type road flare

Securing a Flare

If on a hill, in high wind conditions, or if the movement of traffic will make the flares roll, use the cap from the flare.

After Lighting the Wax Sealed Flare

- 1 Stuff the loose end of the black tab into the cap, forming a loop with the tab. This should be a reverse loop so that the black top is exposed.
- 2 Place the cap on the rear of the flare (see Figure 28).

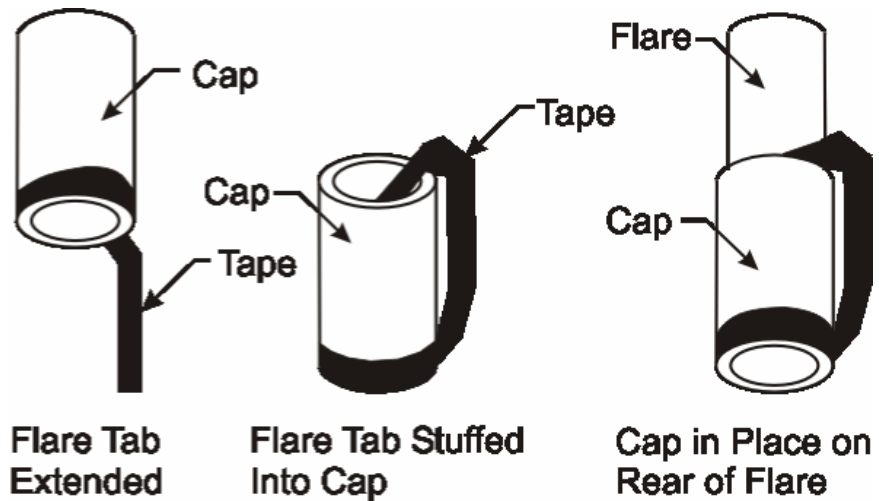


Figure 28: Wax sealed type flare

After Lighting the Plastic Cap Type Flare

Place the plastic cap on the rear of the flare and the extended tip will prevent the flare from rolling (see Figure 29).



Figure 29: Plastic cap type flare

Stacking the Flares

The traffic control officer places flares in a crisscross pattern or stack so that when the first flare has burned out, it will light the next flare. This extends the time period the flares will remain lit and reduces the time the traffic control officer is required to place additional flares (see Figure 30).

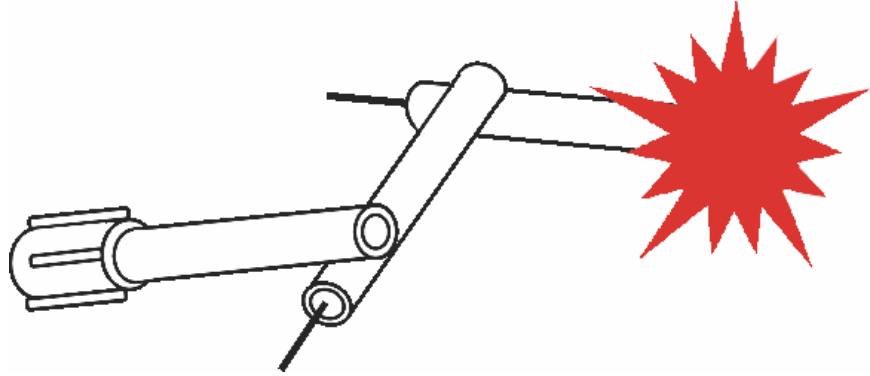


Figure 30: Stacking flares

Procedures for Traffic Accident Scenes

When a traffic control officer arrives at an accident scene, he should do several things:

- 1 He should immediately assess the situation. The safety and well being of the people on the scene (accident victims, witnesses and onlookers) as well as the traffic control officer's own safety are the priority.
- 2 He should visually check the scene and take notice of hazards and blocked lanes.
- 3 He decides whether a flare pattern is needed and which pattern to use.

A single traffic control officer should immediately establish a flare pattern unless first aid is urgently needed. In some situations he may have to utilize the aid of the public. Usually they are very willing to help.

Occasionally, passing motorists will have placed flares at the scene. If flares are already placed on the roadway upon the officer's arrival, it may be necessary to rearrange the pattern to get the desired channeling. Assessing the situation aids in establishing priorities. The handling of emergencies according to relative importance is essential.

When two traffic control officer are present, one should immediately establish a flare pattern if the obstruction cannot be readily moved and the other should handle other emergencies at the scene.

Placement of Flares

Thought should be given to the proper location of flares to give approaching drivers a chance to slow down before coming upon the obstruction and to channel traffic into a safe path around the accident.

Where the traffic control officer places the flares will vary depending upon the accident, the roadway, weather conditions, and what the traffic control officer wishes to accomplish. When investigating accidents near curves and crest, he should always put flares out on the other side of the curve or crest to warn the oncoming drivers that a hazard is present just around the corner or just over the hill (see Figure 31 through Figure 38 for flare positions).

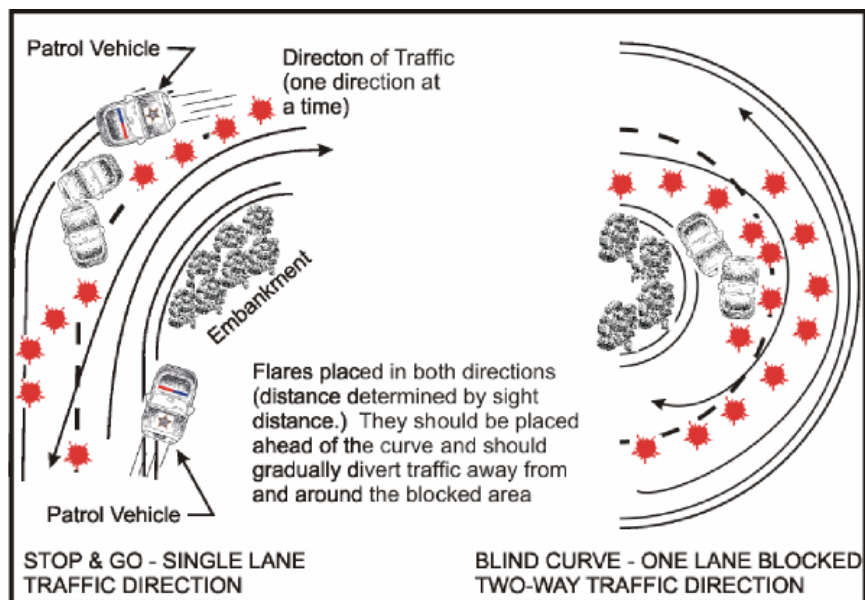


Figure 31: Flare position on curved two- lane roads

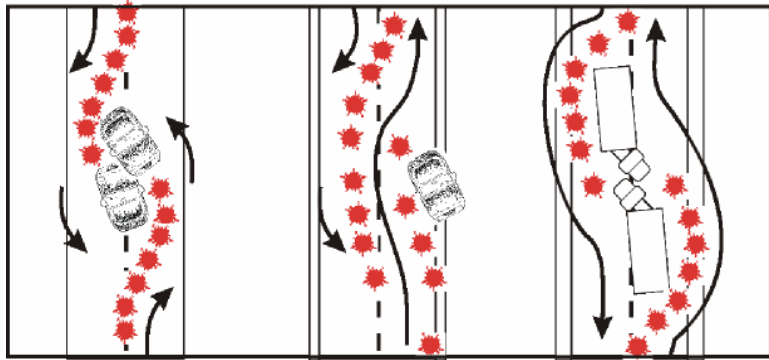


Figure 32: Flare position on straight two-lane roads

It should be noted that there is just as much danger in having too many flares placed at a scene as too few. More flares than necessary will cause blending to occur. The red glow of the lighted flares will blend in with all the flashing red taillights of stopping vehicles and will lead to confusion. Flares set too close together from a distance will blend into a single light and lose their value. Therefore, flares should be placed in a straight line at least 20 to 25 feet apart nearest the obstruction with a gradual increase of 50 to 100 feet apart at the farthest distance needed.

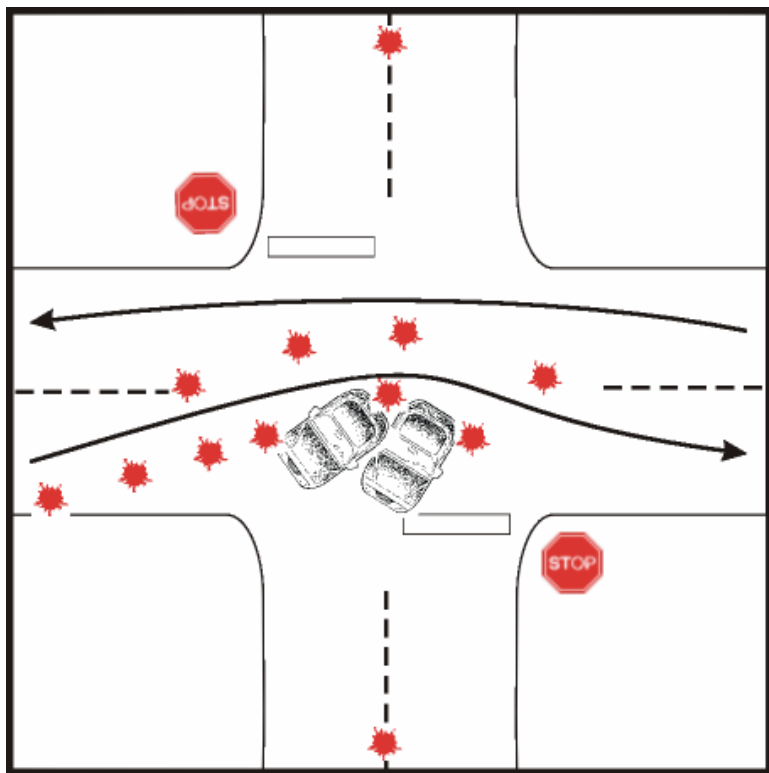


Figure 33: Two-lane roadway with one lane blocked at intersection

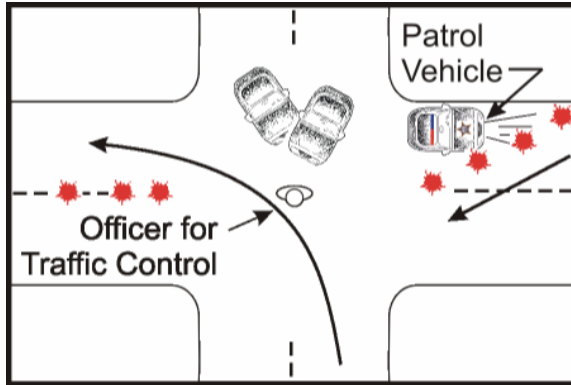


Figure 34: Typical four-way intersection control

Flare patterns should be set to direct traffic to one side only and should lead traffic away from the wreckage and injured. Decision making situations for the driver should be avoided. Traffic should be led in simple paths and straight lines. When it is desirable to have traffic change lanes, the officer sets a gradual alignment that will accommodate the speed of passing traffic.

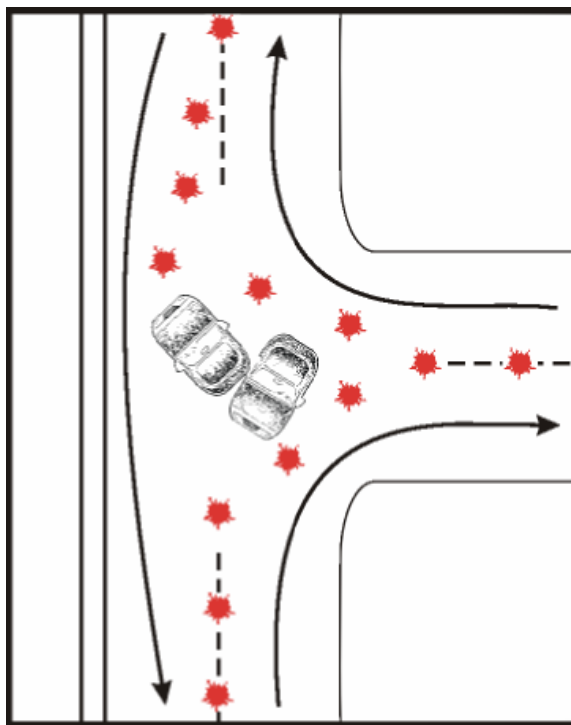


Figure 35: "T" intersection control

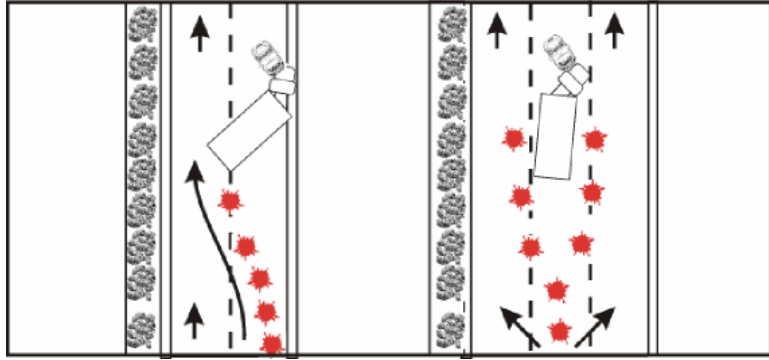


Figure 36: Freeway flare positions (straight road)

In determining how far away to start a flare pattern, the officer should consider the legal speed and the actual speed of vehicles using the roadway in developing a traffic flare pattern at a scene. That is, speed should always be a consideration. The stopping distance chart (see Table 1 on page 27) can be used to determine how far to start a flare pattern from the obstruction. After determining the speed limit and prevailing speeds of traffic, the officer computes the total stopping distance by adding the thinking distance and the braking distance found on the stopping distance chart. The computed distance is the distance the flare pattern should begin away from the obstruction.

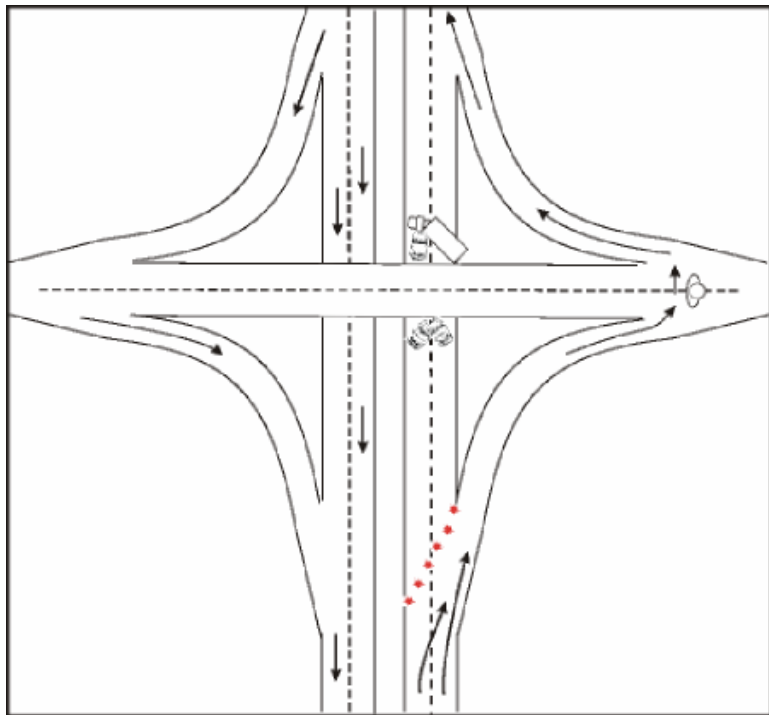


Figure 37: Freeway flare positions (interchange)

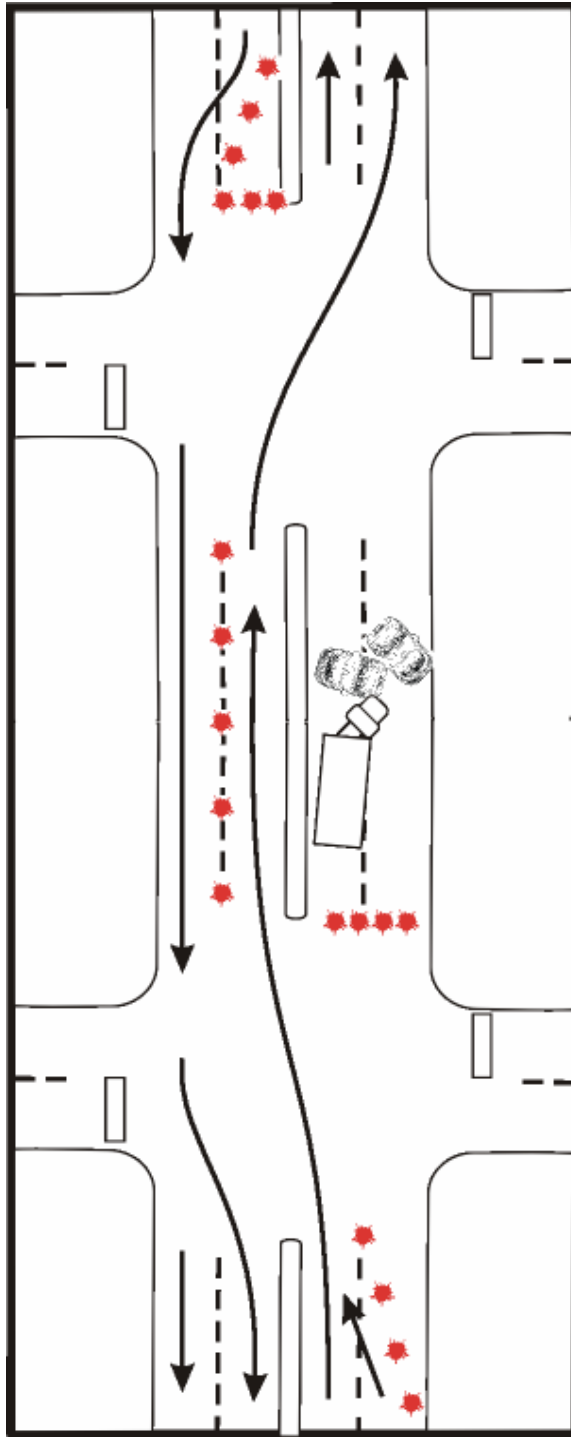


Figure 38: Expressway flare pattern

Table 1: Stopping distances

Passenger Cars Only					
	Speed	Thinking Distance	Braking Distance	Total Feet	
	25	27 feet	34.4 feet	61.4	
	35	38 feet	67 feet	105.0	
	45	49 feet	110 feet	159.0	
	55	60 feet	165 feet	225.0	
	65	71 feet	231 feet	302.0	
Thinking Distance: Distance traveled before brakes are applied while driver is reacting to danger.					
Braking Distance: Distance traveled after brakes have been applied.					
This table is based on average reaction time (0.75 seconds) and passenger car brakes that are 60% efficient. Reaction time, brake efficiency, and road surface conditions always affect total stopping distances.					