



HELICOPTER SAFETY



Escambia County, Florida - ALS/BLS Medical Protocol

DISPATCH PROCEDURES

The standard dispatch for an Air Rescue assignment should be one (1) engine company and one (1) rescue. The need for additional units should be dictated by the incident circumstances. It should be kept in mind that the unit assigned as the LZ (Landing Zone) sector may need all of their personnel to properly secure the LZ site. This may create the need for additional units in order to address patient care needs. The Dispatcher should not take it upon themselves to modify this assignment, nor should they suggest modification of the assignment. As with any Fire Department assignment, the only personnel that can modify the assignment is a Uniformed Fire Department Officer.

See [General Protocol 1.10](#) – Trauma Transport, Helicopter Transport Criteria.

LANDING ZONE PROCEDURES


- A. Rescue Units, when requesting an Air Rescue assignment, should not concern themselves with an LZ unless they know of one at or very near the incident site. The Rescue should concern themselves with proper and rapid patient packaging. In the event that the unit assigned as the LZ sector experiences difficulties in finding an LZ, they should wait until Air Rescue arrives. Air Rescue has a better vantage point in choosing an LZ and they will advise the LZ sector.
- B. In the event that the LZ is remotely located and appears to be safe for landing, the Pilot in Command (PIC) may elect to land without the assistance of an LZ sector. This does not mean that the unit assigned to the LZ should be cancelled. They will be utilized for security, safety, and patient loading once the helicopter is on the ground. The Pilot in Command (PIC) is both legally and operationally responsible for the safety of the aircraft. Therefore, the final decision on the suitability of the Landing Zone is that of the Pilot in Command (PIC).
- C. When setting up an LZ there are several things to keep in mind:
 - 1. The LZ should be set up as to facilitate takeoffs and landings into the wind. (Do not rely on dispatch for correct wind direction, use visual indicators).
 - 2. If the LZ OIC is not sure of the wind direction or of which direction the Helicopter should approach from, then he should wait until the Helicopter is in the



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- area and confer with the Air Crew on this decision.
3. The approach and departure ends of the LZ should be clear of obstacles (any object >40 feet tall that is within 100 feet of the LZ).
 4. Debris such as wood, cans, plastic, should be removed from the LZ. Flying debris can do damage to both the Helicopter and personnel on the ground.
 5. To minimize the hazard of blowing sand and dust, the LZ should be hosed down. (May be hosed down as necessary).
 6. Once the Helicopter has landed, the Marshaller should post a minimum of one tail rotor guard (more than one as needed). This should be someone other than the Marshaller. The Marshaller shall remain at his/her post until the aircraft departs.
 7. No unauthorized personnel shall be permitted to approach the Helicopter. This is the general responsibility of all Fire Department personnel, but it is most definitely the overall combined responsibility of the Pilot in Command (PIC) and the LZ Sector OIC.
 8. The LZ Sector should also assure that the Rescue Unit personnel are supplemented with an appropriate number of personnel to assist in the safe and efficient loading of patients into the Helicopter.
 9. Once the Helicopter has landed, the Marshaller should confer with the Air Crew as to the Helicopter's departure.
 10. It is not necessary to have a hose line pulled and charged. In the event of a catastrophic event involving the Helicopter, tactics and strategy will be left up to the Incident Commander.
- D. The Marshaller is one of several tools that are at the disposal of the Pilot in Command (PIC) for the accomplishment of a safe landing and departure. There are several factors the PIC considers when making an approach or departure into a confined area. This being the case, he/she may not always follow the exact direction of the Marshaller. It should be noted that most approaches will be to the ground, not to a hover. The PIC, at his/her discretion may elect to land without the assistance of a



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Marshaller and may request that the Marshaller remain clear of the LZ until after the helicopter has landed. If the PIC does not follow the exact direction of the Marshaller, be assured there are reasons for his/her actions.

REVIEW YOUR MARSHALLING HAND SIGNALS

A. MARSHALLING

1. POSITIONING.

- a. Will stand at the outer edge of the landing zone perimeter on the windward side, with his/her back to the wind.
- b. Apparatus Lieutenant/Captain will have the primary responsibility for the marshalling duties.
- c. An additional firefighter who is assigned to the Marshaller will maintain constant radio contact with the helicopter as well as visual and verbal contact with the Marshaller.
- d. Remain in eye contact with the pilot at all times.
- e. DO NOT approach the helicopter; remain vigilant at your post.

2. EQUIPMENT.


- a. Helmet with chin strap tightly secured.
- b. Goggles on or visor down.
- c. Gloves.
- d. Full bunker gear with collar up.
- e. Flash lights with wands for night operations.



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3. SAFETY PRECAUTIONS AND PROCEDURES.

- a. **Stay well clear of the tail rotor area.**
- b. Use caution when traversing uneven terrain.
- c. Approach helicopter in pilot's field of vision and **ONLY** after an "All Clear" signal has been given by a helicopter crewmember.
- d. Use low crouch when approaching and departing the helicopter.
- e. **DO NOT** use road flares. **DO NOT** shine spotlights or headlights at the helicopter or into the LZ. The pilot will utilize the "night sun" to light up the LZ as needed. Shinning lights or strobes at the LZ may cause vertigo, night blindness or seizures of the pilot.

RESCUE UNIT PROCEDURES


- A. The Rescue Unit OIC has the primary responsibility of patient care and should not become overly concerned with the availability of an appropriate LZ. The following points should be kept in mind when deciding on Air Rescue as the mode of transport for your patient:
 1. Make your decision to transport by air early. Have Air Rescue dispatched by Shift Commander. Even if you are not sure that your patients meet established criteria for air transport, place Air Rescue on standby status. You can always cancel the standby.
 2. **It is imperative that the ground Rescue Unit contact the receiving facility prior to Air Rescue's on scene arrival.** This will preclude any delay in transportation in the event the receiving facility cannot accept the patient. This early advisory is also necessary to allow the hospital time to prepare for an Air Rescue arrival. Air Rescue may monitor the medical channel and receive patient information while it is given to the receiving facility from the ground Rescue Unit.



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3. Relaying information concerning LZ location and any hazards is a priority (this may be relayed to Air Rescue after they are airborne). The only patient information that the Rescue Unit needs to advise the Shift Commander when requesting Air Rescue is the number of patients and the designated receiving facility. The ground Rescue Unit should not spend time advising Air Rescue of patient(s) condition over the Fire frequencies. That time would be better spent communicating with the receiving facility.
4. There is no reason to provide the Air Rescue Crew with a completed EMS Run Report. This may create an undue delay in the transportation of the patient. A "hard copy" of whatever information you do have should be provided to the Flight Medic.
5. All bandages and dressings shall be affixed securely.
6. The patient will be secured to a backboard with a minimum of three (3) straps, unless contraindicated by their medical condition. The feet must be secured at the ankles. If the patient is unruly, place an additional strap above the knees. Patients lying on a backboard with their head immobilized and nothing securing their bodies is unacceptable. In the event that straps are not available, then another method of securing the patient should be improvised.
7. A minimum of four (4) personnel, one of which will be an Air Rescue Crew member, will carry the stretcher.
8. If the patient is difficult to carry, the stretcher may be utilized, provided the sheets, pillow and mattress are removed.
9. The key to saving a trauma patient that requires surgical intervention is speed. Do not compromise time for invasive procedures other than airway. Most invasive procedures can be done while enroute to the Trauma Center.
10. Be aware of the time you are on the scene with the patient. Attempts at certain procedures may be perceived as progressing at a rapid pace, but in reality they are taking an extended period of time that can better be used in moving the patient.
11. Advise the Air Rescue Unit if you have any additional need of equipment,



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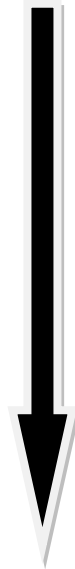
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or assistance (e.g. airway difficulties).

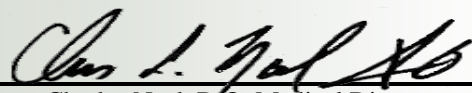
12. Remain at the incident side (or at least 100 feet from LZ) until helicopter has landed.
13. Absolutely no personnel will approach the helicopter unless cleared "in" by an Air Crew Member.
 - a. Do not approach the helicopter with a patient unless escorted by an Air Crew Member.
 - b. It is the responsibility of all Fire Department Personnel to insure that any and all unauthorized persons are prevented from approaching the helicopter. This is usually accomplished with visual and verbal warnings, but in some instances may require physical intervention.



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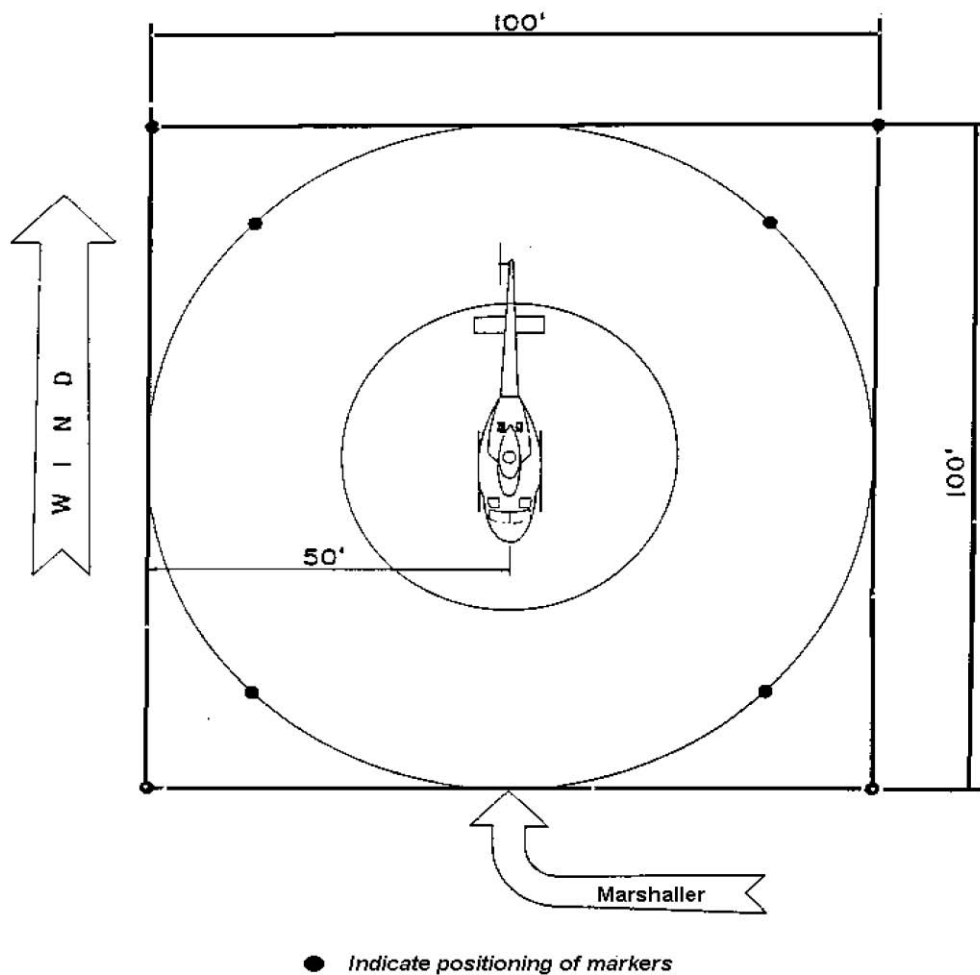


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Landing Zone Criteria



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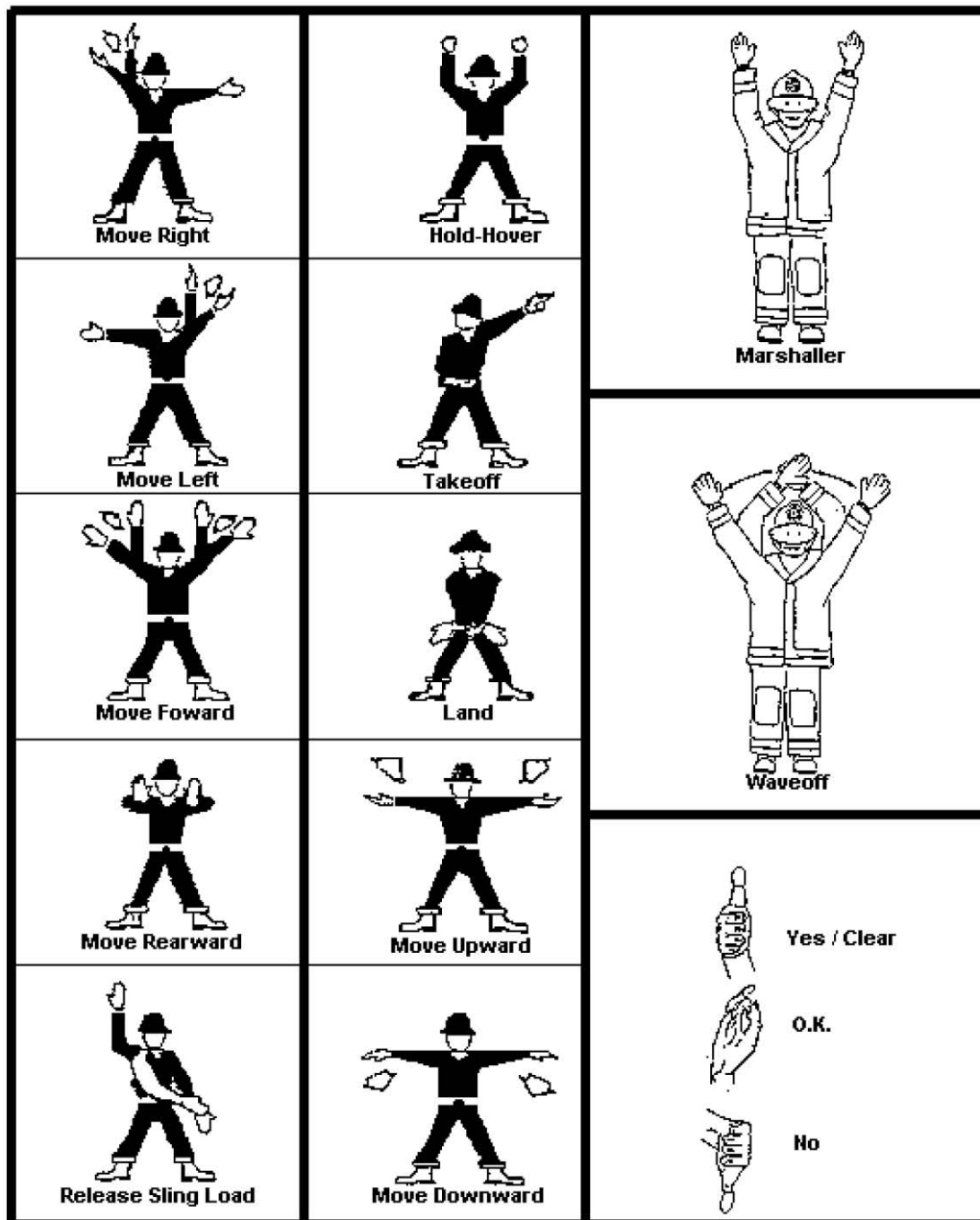

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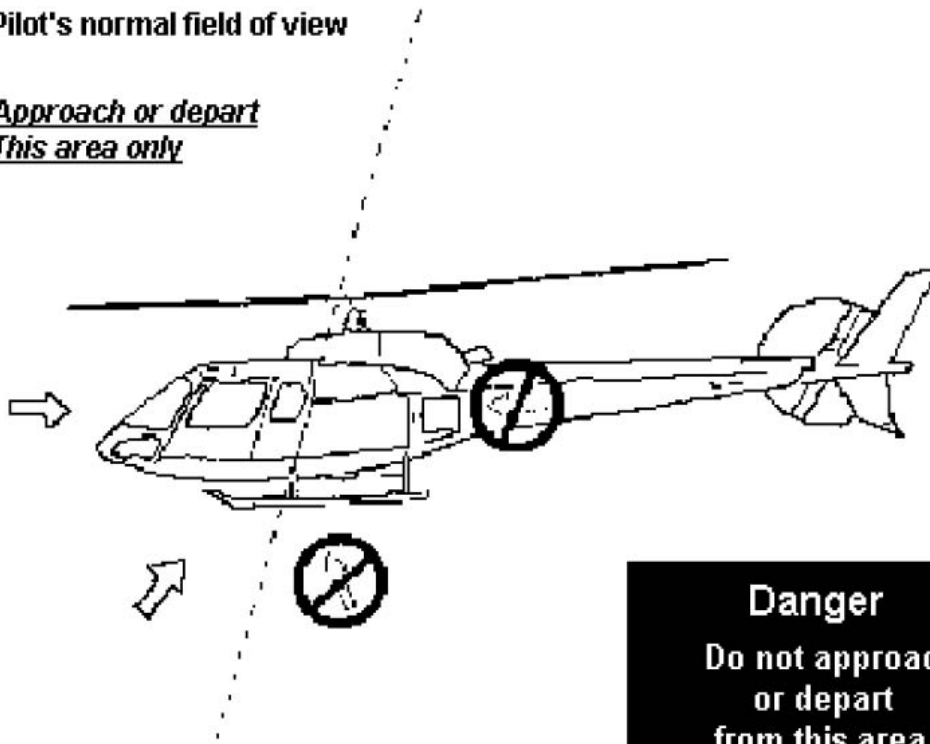
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Pilot's normal field of view

Approach or depart
This area only




Danger
Do not approach
or depart
from this area



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1. Approach or depart machine in a crouching manner



2. Approach or depart machine on the downslope side.



3. Approach or depart machine in pilot's field of vision.




4. Carry tools horizontally, below waist level
(Never upright or over shoulder)



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