

Convoy Operations Battle Book

**Tactics, Techniques, and Procedures for Training,
Planning and Executing Convoy Operations**



**Tactical Training & Exercise Control Group
Marine Aviation Weapons and Tactics
Squadron One**

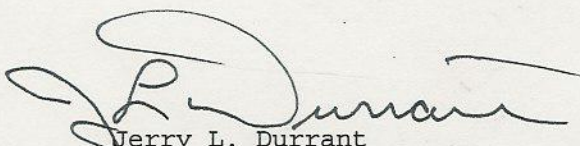
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Prologue

1. This document represents a collaborative effort between the staffs of Tactical Training and Exercise Control Group (TTECG) and Marine Aviation Weapons and Tactics Squadron One (MAWTS-1) in an effort to produce a stand-alone battle book that focuses on training for, planning and executing tactical convoy operations. The genesis of this effort is derived from the Marine Corps' ongoing need to better prepare all elements of the MAGTF (GCE/ACE/CSSE) in executing convoy operations in low, medium and high threat environments. Every convoy is tactical in nature and must be prepared and postured for imminent contact with the enemy. The details of this battle book are based in current convoy operations doctrine, but also take into account nearly two years of lessons learned from combat operations in both Iraq and Afghanistan, as well as lessons learned from exercise units participating in the Revised Combined Arms Exercise (RCAX), Weapons Tactics Instructor Course (WTI), and Desert Talon exercises. This document provides a common source of tactical convoy operations Tactics, Techniques and Procedures at MAWTS-1 and TTECG.

2. The strength of "Convoy Operations Battle Book" is that it arms both the unit leader AND the individual convoy commander (the NCO through junior officer) with the knowledge to prepare Marines in the basics of convoy operations and achieve mission success through the effective planning, rehearsals and execution of a tactical convoy. Additionally, this document provides cogent examples of the best TTPs being employed by forces currently conducting combat operations. The added appendices provide planning and execution tools that the convoy commander can use on a day-to-day basis to assist him in the conduct of his tactical missions. Finally, this document is intended to be a "work-in-progress." With the incorporation of new technologies, along with constantly adapting enemy TTPs, we strongly encourage FMF units to provide constructive feedback in order to ensure the relevance of the information contained in this battle book.



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Chapter One Fundamentals

1001. Convoy operations continue to be a critical element of military operations, predating modern warfare. On today's asymmetrical battlefield the potential to face an enemy combatant exists at every turn. Therefore, it is incumbent for all convoy commanders to treat every convoy as a tactical mission regardless of whether it is a logistics convoy tasked to deliver supplies and personnel or a combat patrol tasked to conduct cordon and search or mobile security operations in a high threat area. Although the tactics will vary based on the commander, weather, enemy, terrain, and the overall situation; the techniques and procedures remain consistent throughout. As leaders we must always seek to fine-tune those tactics, techniques and procedures (TTPs), ensuring that we adapt them to an ever-changing enemy.

1002. Definition. A convoy is the coordinated movement of two or more vehicles over a prescribed route in support of a specific mission.

1003. Intelligence Preparation of the Battlespace (IPB). Planning for convoy operations begins with the receipt of a mission. This may be in the form of a FRAGO, a WARNO, an OPORD, or may be a specified or implied task in order to complete another mission. Upon receipt of the mission the convoy commander should issue a warning order to subordinate leaders in order to maximize preparation time. Tactical analysis and planning for the convoy operation should be framed by considering all the factors associated with the **Mission, Enemy, Terrain/Weather, Troops and Fire support available, Time/Space factors, and Logistics (METT-TSL)** requirements.

a. Mission. The convoy commander will review the mission and identify all specific, implied and essential tasks associated with that mission. Additional constraints and restraints (limitations) will be drawn from an analysis of the mission.

b. Enemy. Defining the enemy and his TTPs will help to develop an understanding of how to react to and mitigate the threat(s) presented. Normally convoys will be conducted in familiar areas where continuous combat operations are being conducted. Because of this, a historical record on

enemy TTPs and activity can be collected and retrieved to facilitate a commander's planning. Information regarding the latest threats to convoys improvised explosive devices (IEDs), vehicle-borne IEDs (VBIEDs), suicide vehicle-borne IEDs (SVBIEDs), mines, snipers, ambush, and other enemy TTPs) can and should be collected and applied to your mission planning. Understanding the capabilities of the enemy, how he is organized, and what strengths and weaknesses he possesses will further help the convoy commander refine the plan. Knowing key time periods and locations that attacks occur within the operating area, especially along the designated route will help to enhance the situational awareness of the convoy and facilitate planning on how to mitigate the threat if it presents itself.

c. Terrain and Weather. The terrain focus for the conduct of convoy operations should be the route that is to be traveled and the adjacent areas to that route. Identification of chokepoints (constricted areas, sharp turns, bridges, mountain passes, built up areas) should be identified using a map and any aerial imagery that is available. The unit intelligence section is a good source of imagery resources that can help facilitate the convoy commander's planning. Through a detailed map and imagery analysis a detailed strip map can be produced that can be provided to each vehicle commander. The effects of weather on the designated route(s) will also be considered. The military aspects of weather that are analyzed include: visibility, precipitation, temperature, winds, cloud cover and humidity. Light data, defined as beginning of morning civil twilight (BMCT) and end of evening civil twilight (EECT), will be considered for movement timeframes and the effect it will have on a Marine to employ his/her weapon systems unaided. Additionally, the percentage of illumination and the percentage of artificial light must be taken into account for night movements and how that illumination either aids or impedes your movement and how it aids or impedes the enemy.

d. Troops and Fire Support Available. The convoy commander will analyze task organization requirements for the specific mission and identify shortfalls based upon that analysis. Common sense "troop-to-task" will help identify those shortfalls. The convoy commander will identify and request other resources available for the conduct of the convoy; to include specialty MOSs (engineers, explosive ordnance disposal (EOD), human or signals intelligence

(HUMINT or SIGINT) detachment, public affairs officer representative (PAO), military police (MPs), Combat Camera, forward air controller (FAC), civil affairs (CA) detachment, aviation escort (fixed, rotary, and unmanned), indirect fires support at designated times along a route, EW support and quick response/reaction force (QRF) support while moving through a sector or zone of operations.

e. Time and Space Planning. Understanding the distance to be traveled, the distance between chokepoints, and the distance between other support organizations along the intended route will help shape the planning for rates of march and movement control. A detailed analysis of all time and space factors will be conducted prior to executing a convoy operation. Specifically, the convoy commander should analyze the following:

(1) Distance between the start point and release point on a route.

(2) Distance between checkpoints and critical points along a route.

(3) Distance of other forward operating bases (FOBs), QRF, EOD support units, and medical support bases along an intended route.

(4) Response time for external support to come to the aid of the convoy at critical points along the route (CASEVAC, EOD, QRF, etc.).

f. Logistics. The amount of logistics support for a convoy will be determined based upon the size of the convoy and the distance to be traveled. Logistics support in the form of vehicle recovery and repair, fuel, food, and medical assistance may be organic to the convoy or coordinated through units located in the area where the convoy traverses. Billeting, messing, refueling, minor equipment repairs, ammunition resupply, cargo transfer and vehicle security will also be planned for enroute and at destination locations if required. These responsibilities will normally fall on the assistant convoy commander.

(1) Fuel. Most vehicles have been fitted with Gypsy Racks and additional mounts to carry extra fuel. If they are not capable of bringing enough fuel for the trip, a vehicle might have to be added to the convoy to transport

fuel. When planning for fuel, the convoy's actions after arrival must be taken into consideration. For example, additional tasking may be given to the convoy for follow-on operations.

(2) Ammunition. Convoy Commanders should plan for a minimum 3-day combat load of ammunition. If a convoy becomes isolated, it could be in a sustained firefight while waiting for reinforcements.

(3) Subsistence. Plan for minimum of 1 DOS of chow per vehicle. 3 DOS is ideal - space dependent. Additionally, convoy commanders need to consider prior coordination requirements for feeding at RON locations for the convoy.

(4) Extra Lift. Plan for enough space to execute bump plans (disabled vehicle), carry detained persons or extra drivers for extended trips.

(5) Self-Recovery. Self-recovery is dependent upon level of training and available equipment. Attaching a Motor-T contact team can solve many of the unforeseen problems. All Marines should be trained in the basics of changing tires and maintaining vehicles. Recommend that minimum equipment required per convoy be; spare tires (1 per 4 vehicles), tow bars (1 per 5 vehicles), heavy-duty ratchet straps, and chains/cables.

(6) Casualties. Convoys must be prepared to treat and evacuate casualties. Convoys should plan to be engaged by enemy forces, which necessitates a requirement to task organize the medical support requirement so that the resource appropriately supports the size of the convoy (troop-to-task). This can be accomplished by training personnel in basic combat lifesaver techniques to be first responders. A convoy commander should disperse his trained medical personnel throughout the convoy.

g. Civilians on the Battlefield (COB). The convoy commander needs to consider the local populace along an intended route and the types of civilians that the convoy may run into. Potential civilian activity that a convoy commander will need to be prepared to handle includes:

(1) Active insurgents

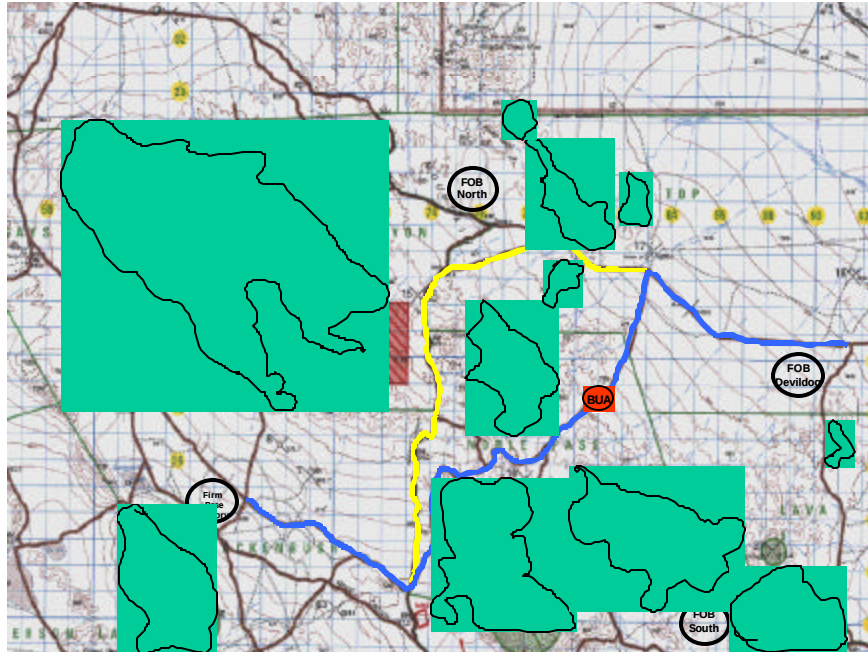
- (2) Criminals (pilferage/theft)
- (3) Sympathizers (non-lethal harassment)
- (4) Innocent bystanders
- (5) Legitimate security forces/militia
- (6) Civilian and government property

(7) Traffic patterns that shift and change given the time of the day and the local populace activities.

A detailed analysis of the route can identify where much of this activity is concentrated.

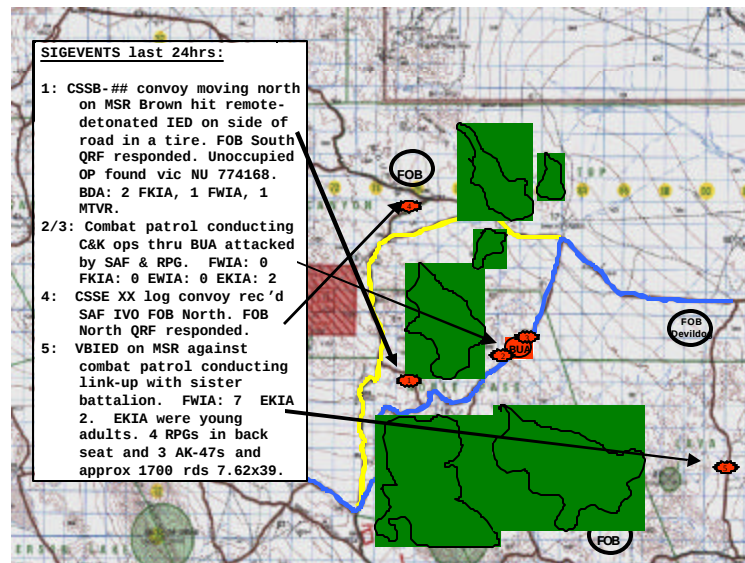
1004. Route Reconnaissance Overlay. Once the initial analysis has been completed the convoy commander will need to apply that analysis to a map reconnaissance of the intended route and areas adjacent to that route. The process below will help facilitate the development of that overlay.

a. Modified Combined Obstacle Overlay (MCOO). As part of the IPB process the MCOO will show those areas along a route that present potential hazards and chokepoints to a convoy. The level of detail on a convoy MCOO should be enough to cover the intended route, alternate routes and areas adjacent to those routes. It should be created from the perspective of the enemy, keeping in mind the enemy TTPs.



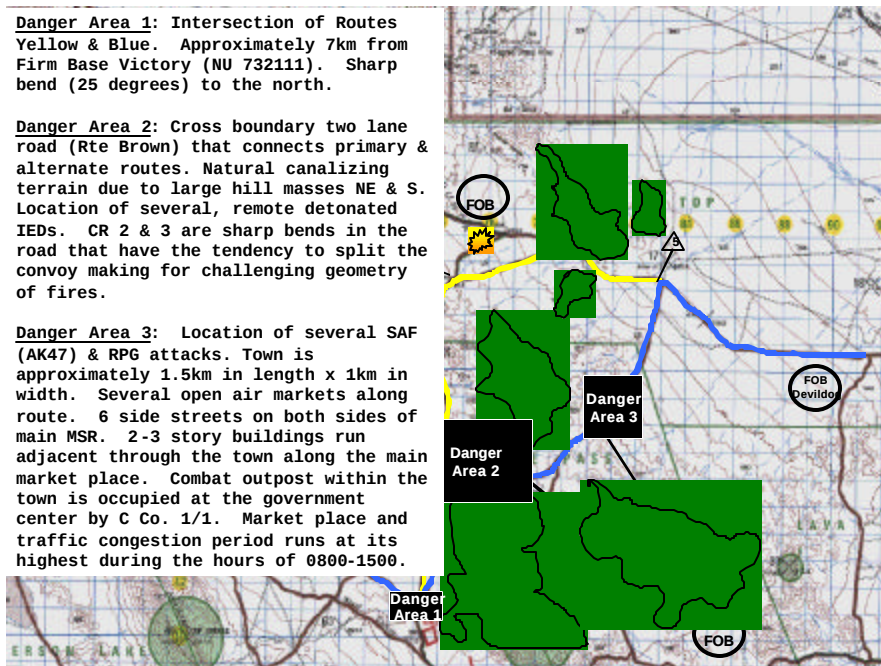
Step 1: Modified Combined Obstacle Overlay

b. Threat Analysis. The next step in developing the route reconnaissance overlay is to analyze the current threat. Convoy commanders should draw on the most current information available, preferably intelligence on the weather, enemy, and terrain that is between 24 and 48 hours old. Plot the locations and pertinent information of enemy TTPs used along your intended route and adjacent routes.



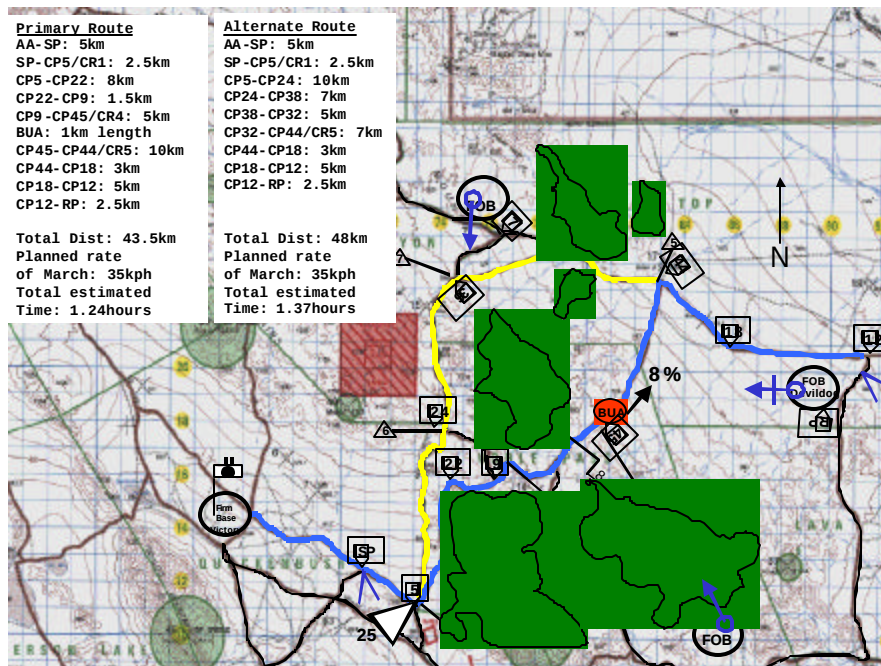
Step 2: Threat Analysis

c. Event Template. Based on information from the MCOO and the threat analysis the convoy commander can produce an event template that outlines danger areas and critical points along the intended route. Danger areas are determined based on enemy activity, chokepoints, and potential hazard areas along an intended route. These danger areas will help in determining critical points (CRs) for a convoy and will facilitate planning for how to mitigate any enemy threats along those defined areas. CRs are those areas that may provide an advantage to the enemy to interdict a convoy movement. These areas may be narrow stretches of roads, built-up areas (BUAs), sharp turns, canalizing terrain adjacent to routes and areas affected by changing weather conditions.



Step 3: Event Template

d. Finalizing the Overlay. The final steps of the route reconnaissance overlay are the plotting of engineer aspects of the route. This includes, steep grades, bridges, sharp turns, overpasses, and road capacity. Checkpoints, which may be given by higher, locations of friendly units and supporting arms, distances and time/space factors between checkpoints and critical points, can be plotted on the overlay thus creating a functioning strip map that can be utilized by each vehicle commander.



Chapter Two

Command and Control Considerations

2001. Convoy Control

a. Organizational Control. Responsibility is that of the convoy commander. It ensures unity of command, observance of the rules of the road, traffic laws and regulations, gaps, routing, schedule discipline en route and at halts, and local security measures. This control is largely exercised through SOPs and TTPs of the unit.

b. Area Control. This is the responsibility of the commander having jurisdiction within a zone, sector or area. This control is superimposed on organizational control to ensure the orderly and effective movement of vehicles within an area. Examples may be traffic control points (TCPs) along a route, restricted routes and bypasses, restricted fire areas (RFAs), and specific communication requirements when moving cross boundary into other zones and sectors.

2002. Task Organization. Commanders organize convoys in order to control road movements of troops and equipment. The mission may be the tactical movement of combat forces. The movement may be in support of logistics units, supplies and equipment to support forces in combat. The convoy may be in the form of a patrol with a specific mission to conduct cordon operations. Critical to the success of the convoy is the commander's ability to define specific and implied tasks inherent to that mission. By doing this the convoy commander will be able to identify unique requirements that may or may not be organic to his organization. Non-organic requirements should be requested for from higher headquarters. An example may be an information operations (IO) team within the convoy, with interpreter support, due to the route taking the convoy through highly populated areas where the IO campaign for an operation is critical. The considerations provided herein pertain to task organizing for combat operations. Upon finalizing the make-up and task organization of the convoy it becomes the convoy manifest.

2003. Roles and Responsibilities

a. Convoy Commander (CC). The convoy commander is the single leader charged with the responsibility of

planning, preparing and executing a convoy movement. During a road march the CC will normally position well forward in the body of a convoy, but will move around to any position that will facilitate command and control of the convoy.

b. Assistant Convoy Commander (ACC). The ACC is responsible for the logistical support of the convoy during preparation and execution. In coordination with the CC, the ACC plans for all classes of supply required for the convoy. The ACC ensures that the maintenance of vehicles, communications, weapons and other key equipment is checked. The ACC is responsible for ensuring that medical preparations to treat and evacuate casualties are accomplished. During execution the ACC will normally position in the trail of the convoy. From that location the ACC can control the trail of the convoy for the CC, report the passage of all checkpoints and critical points, control the actions of aid and litter teams and vehicle recovery teams, and maintain situational awareness for the convoy commander on activities in the trail of the convoy. The ACC reports to the CC. Upon the CC's death or incapacitation, the ACC immediately becomes the CC.

c. Security Element Leader (SEL). The SEL is responsible for the tactical employment of organic QRF forces that are attached to a convoy. Additionally, the SEL will train all attachments, and machine gunners in standard immediate action (IA) drills that the convoy will use. The SEL will provide recommendations to the CC on route selection and placement of security personnel within a convoy. The SEL reports to the CC.

d. Lead Vehicle Commander (LVC). The LVC is normally responsible for navigation, speed and interval of the convoy.

e. Vehicle Commander (VC). Has overall responsibility for vehicle and crew readiness. He should know how to employ the vehicle tactically in all situations and should be able to command those in the vehicle crew. The VC may be assigned in writing to a particular vehicle depending on unit SOP. A vehicle commander should be proficient in basic convoy operational terms and graphics, all weapons and communications systems aboard his vehicle, basic Marine rifleman skills, and unit SOP.

f. Driver. Has primary responsibility for the movement of the vehicle and should not be assigned other duties while employing the vehicle. The driver is typically junior in a vehicle crew and is responsible for maintaining the vehicle. He is responsible for: performing 1st echelon maintenance; rigging the vehicle for tow; performing recovery operations; tactical employment in relation to vehicle positioning; all-terrain driving; and conduct of night operations with and without NVDs.

g. A-Driver/Assistant Vehicle Commander (AVC). Typically second in command of a vehicle. Rides behind the driver so that he may communicate with VC or replace VC or Driver during crew drill. Also serves as an A-Gunner/Ammo man for the up-gun system on the vehicle. During normal operation is assigned to cover the left side of the vehicle. Assists VC as necessary. Like the VC, he must also be proficient in all weapons and communications systems aboard his vehicle.

h. Gunner. Primary responsibility is for employment and readiness of the up-gun weapon system on the vehicle. Must be knowledgeable of primary weapon system, tactically proficient at vehicle emplacement, scanning techniques, range cards, and basic machine gun gunnery. The gunner should be qualified via a Machine Gunner's Course to operate the weapon system and receive regular sustainment training in order to maintain ITS proficiency standards, both live-fire and non-live-fire.

i. A-Gunner. Assists the Gunner. Serves as ammo man and is assigned a sector of the vehicle to cover, typically right side. Must be prepared to assume the duties of Gunner or Driver as necessary.

j. Combat Life Savers (CLS)/Corpsmen. The CLS/corpsmen are responsible for rendering medical treatment and facilitating the evacuation of casualties. When possible, multiple CLS/corpsmen should be placed in each element of the convoy, assigning them responsibility for specific vehicles in order to streamline and expedite medical attention. If only one CLS/corpsmen is assigned, a recommended technique is placing this person in the trail portion of the convoy so he can better support casualties anywhere in the order of march.

k. Aid and Litter (A&L) Team. An A&L team is comprised of two to four Marines and is responsible for rendering buddy aid and preparing casualties for movement under the supervision of the CLS/corpsmen. Multiple A&L teams should be trained to cover all elements of a convoy. If only one A&L team is available it is recommended that it be placed in the trail of the convoy.

l. Landing Zone (LZ) Team. The LZ team is responsible for selecting, securing, clearing, establishing and marking LZs for air CASEVAC and/or resupply. Standard SOPs should be developed for LZ team procedures.

m. Obstacle Clearing Detachment (OCD). When available, an OCD can help facilitate the movement of a convoy along an intended route. The OCD's sole responsibility is to provide a breaching capability for the convoy. When a dedicated OCD is not organic or attached to a convoy the convoy commander must still plan, rehearse and be able to execute breaching via mechanical means at a minimum.

2004. Communications. When planning for communications in support of a convoy operation the planner must consider the following; the communication requirement, how will a limited number of radios be allocated, what will be the communication and signals plan, what radio nets will be required to communicate with higher, supporting, and adjacent units and is there redundancy built into the communication plan.

a. The Communication Requirement. Communications are required to effectively control movement, coordinate with friendly units en-route, control and coordinate responses to enemy actions, request and control supporting arms fires, request support for casualty evacuation and report the progress of the convoy march to higher headquarters.

b. Radio Allocation. The allocation of radios must take into consideration the balance between resources available and the requirements at hand. Most times you will find that the overall requirement will normally exceed the quantity of resources on hand. Therefore, it is imperative that prioritization of tactical radios - who in this convoy requires the radios the most - is conducted. If resources allow, it is recommended that one tactical radio accompany each vehicle within the convoy. However, the size of a

convoy should not be structured to the amount of radio assets available to a unit. Therefore, providing one tactical vehicle per element within a convoy is a minimum standard that is recommended. Placing two tactical radios with the convoy commander provides for duplication and redundancy in the event a radio malfunctions or is destroyed.

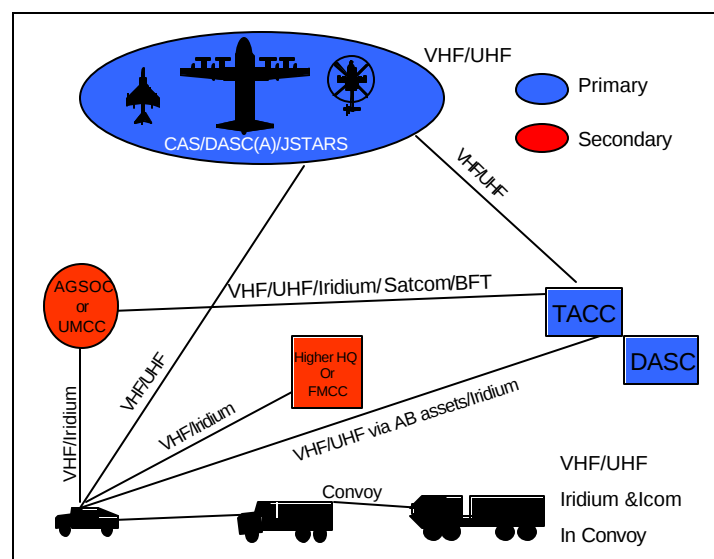
c. Communications and Signals. Unit commanders must develop communications and signals in a manner that can be seen or heard during a convoy operation. Factors such as engine noise, gunfire, smoke, dust, and other environmental influences that may interfere must be considered. The convoy planner should always have a primary and alternate method to communicate both within and outside the convoy. There are two types of signals that can and should be prepared for a convoy operation, visual and sound. Visual signals include arm and hand signals, panel markers, lights, flags, pyrotechnics and message boards/signs. Sound signals include horns, whistles, loudspeakers, sirens, and verbal messages. Each different type may serve a different purpose and should be used jointly to add duplication and redundancy to your communication plan. The signal plan should be easily understandable and rehearsed by all members of the convoy. See Appendix H regarding hand and arm signals and other visual communication techniques.

d. Radio Nets. Communication nets employed by a convoy will vary according to the composition of the convoy, equipment availability, and the tactical situation. Higher headquarters will establish an external convoy control net to communicate with its convoys. The purpose of this net is to maintain continuous situational awareness of the higher headquarters, de-conflict movement with other convoys on road networks, and issue changes as required to the movement as the tactical situation dictates. An internal convoy net is required to pass information and communicate between elements within a convoy march column. These two nets should be established with their own net identification. A few techniques that facilitate the passing of information include; smart packs for vehicles that identify frequencies and call signs of the convoys internal communications and those of other convoys operating on the road networks. Ultra high frequency (UHF) radios should be planned for when air escort and casualty evacuation helicopters are available. Satellite communication and high frequency (SATCOM/HF) radios are recommended for all long-range communications. Lastly, the convoy commander should consider the use of cell/iridium

phones that are very reliable though not secure. See Appendix I for typical communication nets and systems used for convoy operations.

e. Communications during convoy operations can be extremely difficult due to range limitations (transmission/reception) caused by distance and terrain. Convoy Commanders must have an understanding of communications architecture to make use of all available means to communicate. The Convoy Commander must be prepared to enter and use the air, artillery, and tactical radio nets of the units in whose area of responsibility he is operating in during movements. The communications nets employed by convoys may vary according to their composition, tactical situation and assets available. However, there will be at least one active net (or other method of communication) to higher headquarters and two active nets within the convoy (resource dependant).

(1) Higher Command and Control. The parent command of the convoy will establish a Unit Movement Control Center (UMCC) or an equivalent operations center to monitor convoy movements. The convoy coordination net may vary from VHF to satellite communications frequencies and will serve as the primary means of contact with the UMCC. However, there are many alternate agencies where communications can be routed. During planning, redundant communications must be ensured by planning for and establishing primary, alternate and tertiary means throughout the entire convoy route.



(2) Internal Command and Control. At a minimum, communication is established between vehicles, with the preferred/primary method being radio. However, hand and arm signals, voice, horn, whistle, headlight, chemical lights and pyrotechnical signals should be planned as redundant options for primary, alternate and tertiary means of communication while mounted and dismounted. Each vehicle must be able to communicate and convoy commanders must prioritize where assets are placed when he has limited radio assets. Two VHF nets should always be planned for. One dedicated to internal convoy control and one dedicated as a security element net. With limited assets (VHF radios), priority will be given to:

- a. Convoy Commander
- b. Security Element Leader
- c. Rear Security Element

Priority of UHF assets resides with the FAC/JTAC, if attached. The convoy commander, to control his convoy and communicate with element leaders, will use the convoy control net. The Security Element Leader will monitor the convoy control net, but his primary radio net will be the security element net in order to coordinate security element activities. In addition to controlling the convoy, the radio nets also serve to build situational awareness throughout the convoy.

2005. Reporting Procedures. Standing Operating Procedures are established to determine which items of information are reported through the chain of command in order to minimize radio traffic and ensure essential elements of information are passed to the Convoy Commander. Check points, phase lines and rally points are continually reported through the chain of command. The SALUTE format should be used to report enemy activity, but not at the expense of timely reporting. Brevity in communications promotes efficiency and operational security. Pro-words can enhance communications brevity.

a. Pro-Words. Convoy Commanders must manage use of pro-words for simplicity within the convoy, and must also understand that higher headquarters and outside agencies may not be familiar with these pro-words, unless pre-briefed.

An example pro word would be "Steelers." In this example, "Steelers" would be defined as "troops in contact." When the convoy comes under enemy contact, "Steelers" would be called on the radio from the vehicle(s) in contact and the convoy commander would make the following radio call to higher headquarters: "W7U, this is A8B, Steelers grid 123456, over." Higher headquarters would either ask for amplifying information or initiate plans and actions accordingly to provide additional support for the convoy. Internal to the convoy, Pro-words can be used to coordinate actions against the enemy. If the Pro-word "Ravens" means to execute a reaction drill to contact to the right and the convoy is ambushed from the right side, a Convoy Commander would say "Ravens," and give his subordinates enough information to begin addressing the threat. Pro-words are often seen on execution checklists, but are not limited to them.

Chapter Three

Convoy Preparation

3001. Warfighting Functions. Consideration of all the warfighting functions needs to be applied when preparing for convoy operations.

3002. Preparation Considerations

a. Reconnaissance. Ensure S-2 and S-3 have your route information and understand your intelligence requirements so they may begin the collections process to support your mission. Concurrently, conduct the following actions:

(1) Conduct a thorough map study of the route and all terrain from which the enemy can influence your route. Identify critical points, choke points, potential key terrain, and possible ambush sites.

(2) Request all available information (imagery and video) collected from ISR platforms.

(3) Determine whether a route classification or detailed reconnaissance of your route has been conducted. Other units may be assigned route security responsibilities for portions of the convoy route. In this case request a current SITREP directly from the responsible unit.

b. Liaison and Coordination. Conduct liaison with adjacent/supporting units, aviation elements, attached units for movement, and units along the route. Conduct coordination for movement, passage of lines, link-up, via your Unit Movement Control Center (UMCC) to higher UMCCs or Force Movement Control Centers (FMCC). This may include ensuring your convoy is listed on tracking schedules with higher headquarters. An example of a tracking schedule is the Ground Transportation Order (**GTO**) utilized by Division units.

c. Movement. Concurrent planning of potential halts, movement timelines, checkpoints, and communication points must be established (points at which you can begin contacting adjacent units along your route).

d. Security En Route. Begin fire support planning with consideration to what indirect fire assets can support your convoy route. It is essential that aviation requirements are identified and the unit Air Officer submits Joint Tactical Air Requests (JTARs) and Assault Support Requests (ASRs). Forward Air Controller (FAC) or Joint Tactical Air Controller (JTAC) support should be requested if the convoy does not have this organic capability.

e. Service Support. Arrangements for fuel for return trips, mid-point refueling via internal or external means, contact teams, and possible billeting arrangements for long haul convoys.

f. Communications. Cell phone, satellite phone, SATCOM, HF, UHF, VHF doctrinal nets must be programmed and tested. It is important to consider cryptographic changeovers for long haul convoys. Force XXI Battle Command Brigade and Below (FBCB2) and Blue Force Tracker (BFT) addresses must be confirmed.

g. Electronic Warfare (EW). Information concerning frequencies, types, and numbers of ground and air based electronic warfare systems must be planned for and added to the fires section of the movement order.

(1) Ground. Determine whether ground based EW can support your convoy. These systems can be assigned and employed from within your convoy or from an external agency, such as Radio Battalion (RadBn). Systems utilized may include IED jamming and pre-detonating devices.

(2) Air. Determine whether Airborne EW assets are available and can support your convoy, or have conducted recent over flight of your route.

3003. Individual/Unit Preparation. The single most important task the CC will have is ensuring that the personnel that comprise the convoy are prepared to execute the mission. Individual preparation should be conducted in the same manner that a patrol leader would prepare a combat patrol. The manner in which gear is worn should be kept uniform throughout the unit. Maintenance of weapons and gear should be a top priority. Sleep should be considered and planned for prior to any convoy movement, ensuring that all personnel are rested and fit to conduct extended multi-

day movements. Rehearsals should be conducted for the following actions:

- a. Dismount and remount drills.
- b. Vehicle recovery.
- c. LZ preparation
- d. Aid and litter team responsibilities
- e. Immediate action drills for ambushes
- f. CASEVAC
- g. IED identification
- h. Communication procedures
- i. Weaponeering and Close Quarter Marksmanship (CQM)

3004. Development of the Movement Order/Movement Brief. The order and brief should be considered synonymous. Once the information is collected that will make up the convoy order/brief the convoy commander must put the information into a format that can be easily understood by all. He may delegate certain parts of the order to subordinates (i.e. the security element leader). However, the convoy commander is responsible for ensuring all information is accurate and in accordance with his intent, and with his higher commander's intent. As units become proficient at convoy operations and develop SOPs it will not be necessary to brief in detail all of the items listed below. Formats for organization of the information are widely available. Listed below is one such format, with explanations for each section:

- a. Task Organization/Chain of Command. Task organization of the convoy should be addressed up front so that all key players and command relationships can be identified.
- b. Situation

(1) Friendly Forces. Give current situation report (SITREP) of friendly positions and current actions that may affect the convoy. Other considerations are:

a. Route color-coding, if applicable, based on threat information.

b. Aviation/air space color-coding over the route, if applicable.

c. Adjacent units the convoy will conduct passage of lines through.

c. Higher Headquarters Mission

(1) HHQ Commander's Intent. Define the purpose, Method, Endstate goals of the mission.

(2) Support. List all available support for the convoy. Considerations include:

a. Fire support available (both air and ground).

b. External support: trams, wreckers, refuelers, etc.

c. Military Police escort or attached infantry support.

d. Any available joint assets (i.e. JSTARS).

(3) Enemy. Updated from WARNO.

a. Current situation/strength/MDCOA/MLCOA

b. TTP's as they relate to the convoy (i.e. Where is the convoy vulnerable to the enemy? How has enemy been operating in the convoy AO? Recent Activity?)

(4) Weather. Potential impact on the convoy

a. Current/future conditions

b. EECT/Sunrise/Sunset

c. Thermal crossover considerations/times (NVG window).

d. Mission. **Who, What, When, Where, Why (5W's)**

(1) Higher Headquarters Mission 2 Levels up.

(2) Tactical task and purpose.

(3) Type of cargo.

(4) Point of origin/destination.

e. Execution

(1) Commander's Intent (Convoy Commander's Intent)

a. Purpose, Method, Endstate (what constitutes mission success?)

(2) Concept of Operations/Scheme of Maneuver

a. Big picture of how the operation will be executed, by phase.

b. By phase, give an overview of the route, including the start point (SP), the rally point (RP), check points (CPs), critical points (CRs), casualty collection points (CCPs), ambulance exchange points (AXPs), and other points of interest.

c. Alternate routes (inclusive of information above).

d. Order of Movement (OOM). The location of all support and combat elements.

1) Identify location of weapons systems in the convoy.

2) Identify location of corpsmen in the convoy.

3) Identify location of tow bars and other recovery assets in the convoy.

e. Convoy speed and interval

- 1) Route speed
- 2) Driving techniques such as "staggered," if utilized.
- 3) Method of controlling interval/speed (pro-words).
- 4) Catch-up speed, slow down speed.
- 5) Calls to initiate actions (pro-words).
- 6) Rally points (stationary and floating).

f. Actions on Contact

- 1) IED/VBIED/SVBIED strikes or potential strikes.
- 2) Ambush - Unblocked
- 3) Ambush - Blocked
- 4) Indirect fire ambush
- 5) Sniper
- 6) TCN vehicle breakdown, if applicable
- 7) CASEVAC procedures
- 8) Accidents (military and civilian)
- 9) Air strike
- 10) NBC strike

(3) Tasks to Subordinate Units

a. Reconnaissance element/lead security

body.

- 1) Define distance/interval from main

- 2) Establish priority of information collection (what to look for).

- 3) Define critical information.

- 4) Engagement criteria

instructions.

- b. Pace Vehicle. Speed/interval

- c. Contact Team. Towing, recovery, and destruction instructions

- d. Security Element (may be briefed by SEL)

- 1) Engagement criteria

- 2) Disengagement criteria

- 3) Bypass criteria

- 4) Link-up procedures

- 5) Actions during Passage of Lines

- 6) Scenario situations for engagements (back-brief/chalk talk).

- 7) Restate intent for Security Element actions. Define security element roles/responsibilities and relate security element tasks to other convoy members.

- 8) Review any SOP

- e. Transport Element

- 1) Assign sectors of fire

- 2) Assign Air/IED sentries

- 3) Any specific instructions

f. Support Element

- 1) Assign sectors of fire
- 2) Assign Air/IED sentries
- 3) Any specific instructions

g. Command Element

- 1) Assign sectors of fire
- 2) Assign Air/IED sentries
- 3) Any specific instructions

(4) Coordinating Instructions

a. Actions at a halt (long and short defined).

b. ROE. Review and discuss scenarios.

c. PIR/IR. Define to convoy members what to look for.

d. Weapons Conditions. Review weapons conditions by phase and review/brief convoy commander or SEL on methods of control and rates of fire.

e. Night Operations. Define when to prep (based off EECT/Timeline) and define artificial light conditions and when they may be broken.

f. Vehicle Marking Plan (Day and Night).

g. Combined Arms Plan. Consider the employment of all fires when in contact and define who is in control of fires (direct/indirect). Address the conduct of detailed rehearsals, battlespace geometry and actions of individual convoy members for fratricide avoidance. Address the plan for use of air support.

f. Administration and Logistics

(1) Cargo loading and Staging

a. Special equipment required.

b. Priority loads in convoy (this may affect convoy tactics).

c. Equipment needed upon delivery/special offload instructions.

d. Any special security considerations due to cargo.

e. Cargo bump plan/destruction plan.

(2) Control of Personnel

a. MACO procedures at halts (mount/dismount/accountability).

b. Vehicle assignment/manifest confirmation

c. Personnel bump plan

(3) Uniform and Equipment

a. Define convoy commander's expectations.

b. Establish what is required for mission accomplishment (plan for 3 days).

c. Review hard target/soft target considerations.

(4) Ammunition

a. 3 day load out (combat load).

b. Load plan confirmed.

g. Command and Signal

(1) Succession of Command. Define location of each key leader.

(2) Communication

- a. Frequencies (both air and ground).
- b. Locations of key communications assets.
- c. Verify communication Smart Pack for each vehicle and ensure accountability after mission completion.

(3) Signal Plan

- a. Pyrotechnic signals.
- b. Hand and arm signals.
- c. Vehicle signals (horn, lights flashing, etc.).
- d. Pro-words used.
- e. Challenge and password.
- f. Base number from ATO.

3005. Vehicle Preparation. Hardening of vehicles is critical to ensure the survivability of a convoy. Soft areas that may need to be reinforced include:

- a. Floorboards
- b. Gas tanks
- c. Truck beds
- d. Windshields and mirrors
- e. Battery boxes

Materials used to perform hardening include reinforced armor plating, Kevlar blankets, SAPI plates, sandbags, tarps, and lumber shoring. See Appendix L for examples.

3006. Terrain Models. Concurrent with convoy planning, a terrain model of the convoy route should be built that coincides with strip map generation. Convoy members must

be able to compare the strip map to the terrain model and identify key features that will allow them to navigate without the aid of GPS. The terrain model should adequately depict the friendly and enemy situational template. Convoy members should walk away from a terrain model with a clear picture of the route being traveled. Units should establish terrain model kits and designate terrain model teams. Items which may help with terrain model production are:

- a. Spray paint.
- b. Twine or yarn.
- c. MRE boxes and contents.
- d. SL-3 kits from vehicles.
- e. Note cards.

3007. Briefing. Convoy Commanders have a responsibility to ensure that all convoy members are briefed on the plan. All members of the convoy should attend the convoy brief, held at the terrain model. Convoy members must come prepared to take notes and ask questions. The process should follow this general outline:

- a. Take Roll Call.
- b. Convoy members told to hold all questions until the end.
- c. Element leaders introduced.
- d. Orientation of the terrain model.
- e. Models of vehicles shown (in convoy order) for reference. Convoy Commander will use the small-scale models as the order is given to depict convoy actions and walk convoy members through the scheme of maneuver.
- f. Deliver the convoy order in a format similar to the one listed above.
- g. Questions and answers.
- h. Conduct back brief.

3008. Rehearsals. Concurrent with planning, rehearsals should be conducted. The convoy commander should prioritize rehearsals in the warning order. Rehearsals are a key element to mission success. All actions to be conducted must be rehearsed. The following is a list of suggested rehearsal items:

- a. Communications.
- b. Crew Drills (keep vehicles in action).
- c. Mount and dismount drills.
- d. Break contact/disengagement.
- e. Halts (long and short defined).
- g. IED/VBIED/SVBIED strikes or potential strikes.
- h. Ambush - Unblocked.
- i. Ambush - Blocked.
- j. Indirect fire ambush.
- k. React to Sniper.
- l. TCN vehicle breakdown, if applicable.
- m. CASEVAC procedures.
- n. Accidents (military and civilian).
- o. Air strike.
- p. NBC.
- q. Towing/recovery procedures/tire changing drills.
- r. Bump plan.
- s. Vehicle destruction.
- t. Bypass of enemy while security element suppresses.

3009. Pre-Staging. Prior to reporting to the staging area, a vehicle commander (VC) has the responsibility to conduct Pre-combat Checks (PCCs) and Pre-combat Inspections (PCIs). PCC/PCIs are a physical check conducted by a responsible NCO or above. These checks and inspections are conducted by individual vehicle and include, but are not limited to, the following:

a. Vehicle Checks

- (1) Oil/Water/all fluids/belts/hoses.
- (2) Tire pressure.
- (3) Correct Load Plan.
- (4) Clean windows/headlamps.
- (5) SL-3 gear accounted for and stowed properly.
- (6) Fire extinguisher charged.
- (7) Full tank of gas/full fuel cans.
- (8) Vehicle has a minimum 3-day supply of chow and water.
- (9) Vehicle is properly marked.
- (10) Up-gun is properly lubed, .50 caliber head space and timing set and proper T&E mechanisms in place.
- (11) All contents properly gripped/stowed as not to become FOD during IED strike.
- (12) Spare tire/tow bar/hasty recovery items

b. Personnel checks

- (1) Hygiene/general health of each Marine.
- (2) Ammo issued.
- (3) Appropriate pack loaded with gear (mission dependant).

(4) 782-gear accounted for and worn/stowed properly (in accordance with SOP).

(5) Full body armor system worn to include SAPI plates.

(6) Personal weapon is properly lubed/cleaned.

c. Conduct test fire of all weapons.

d. Test of all NVDs/Thermal sights.

e. Radios loaded (with crypto) and initial communication checks completed.

3010. Actions at Staging Area. Once in the staging area convoys should assume Readiness Condition 3 (REDCON-3). Due to the vulnerability of the staging area, units should spend no more than two hours in this location and should treat the area as if conducting a convoy halt outside of friendly lines. Other actions in the staging area include:

a. Convoy Commander inspections conducted

b. Vehicles placed in convoy order

c. Final communication checks conducted

d. Last minute changes to movement plan passed

e. Strip maps updated

f. Intelligence updated

g. Time hack updated

3011. Actions at Start Point (SP) - The Start Point should be located at a sufficient distance from the staging area to facilitate establishing the convoy interval. Ground-based EW checks should be conducted between the Staging Area and the SP. EW checks are not conducted in the staging area unless there is adequate separation between vehicles. This will help avoid damage to the EW systems. Once units reach the SP, minimum communications should be exercised. Each element leader with radio communication should contact the Convoy Commander and report when

crossing SP. The Convoy Commander begins to monitor and control vehicle dispersion, convoy speed, actions of the element leaders, and available aviation.

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Chapter 4

Movement Planning and Execution

4001. General. With the increase of operations involving asymmetric threats convoys have become more complex. The absence of well-defined friendly and enemy areas has created an emphasis on the "combat nature" of the convoy and its significance to the overall operation. When discussing movement control we will address it along two spectrums; the higher headquarters movement control and the tactical convoy commander's movement control. The two are interlinked and work together in the conduct of convoy operations.

4002. Types of Convoys. Doctrinally, convoys are either looked at as administrative movements or tactical movements.

a. Administrative. Convoys designed to move personnel and equipment to their destination as quickly as possible, while conserving time and energy. No enemy interference is possible. Administrative convoys are used on bases and in training areas.

b. Tactical. Convoys designed to move personnel and equipment under threat of enemy action. Tactical convoys are separated into two categories:

(1) Tactical Road March. The movement of supplies and personnel to prepare for combat operations. Although contact with the enemy is not expected, security is maintained and the unit is prepared to take immediate action against the enemy.

(2) Tactical Movement. A movement or maneuver to contact with the enemy or during which contact is anticipated. Elements are organized to facilitate combat.

4003. Convoy Organization. Convoys may be divided into three elements:

- a. The March Column.
- b. The Serial.
- c. The March Unit.

The term March Column and Convoy are synonymous in most cases. The March Column consists of all the vehicles involved in a single move over the same route. The Serial is a subdivision of the March Column and can be divided into the Head, Body, and Trail. The March Unit is a subdivision of the Serial. For example, the command element is a March Unit of the main body. The head element is normally comprised of gun trucks, a security element and special attachments whose position in the head can facilitate movement. The body will be comprised of the majority of the vehicles in the convoy and will be lead by the CC traveling in the forward portion of the body. Critical supplies such as ammunition and fuel will be spread loaded to the maximum extent possible throughout the body in order to ensure survivability of the convoy. Heavier and slower vehicles should be placed forward in the body and can be used as a measure for maintaining convoy speeds. For large convoys, additional security vehicles and designated teams will be dispersed throughout the body. The trail element consists of recovery vehicles, A&L teams, and rear gun trucks for security.

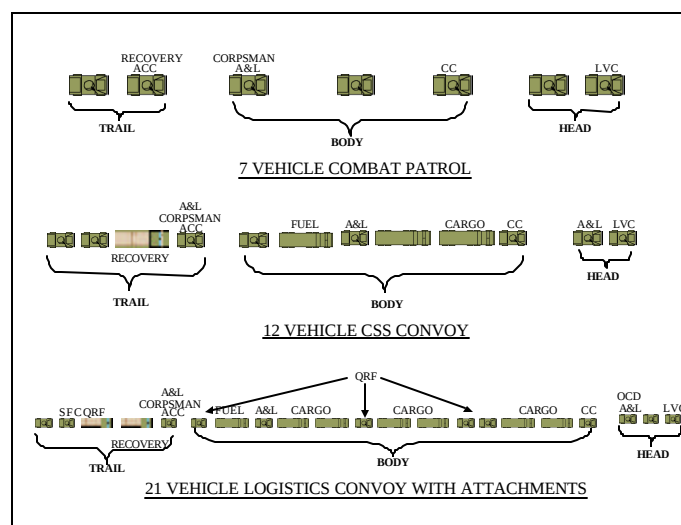


Figure 4-1: Example Convoy Configurations

4004. Movement Techniques. Movement techniques of march columns have several variations, but can be narrowed to three terms: traveling, traveling overwatch, and bounding overwatch. Each movement technique can be executed in the following forms: open, closed, infiltration.

a. Traveling. A movement technique where all elements of the convoy move simultaneously with standard dispersion. This formation/technique is most commonly used in administrative environments but has tactical applications. Traveling minimizes dispersion and security, and maximizes speed, while facilitating control.

b. Traveling Overwatch. A movement technique where the lead and trailing element are separated from the main body by a short distance, which varies with the terrain. The lead element moves at variable speeds and may pause for short periods to overwatch the main body. The trailing element moves at variable speeds to overwatch the main body and is prepared to support the lead element if engaged by the enemy. The advantages to this method are good control, good dispersion, and good forward security. This movement technique allows the convoy main body to move at a constant speed and interval.

c. Bounding Overwatch. A movement technique used when enemy contact is expected. The security units move in bounds. One portion of the security element would always be halted in position to provide overwatch at intersections and other danger areas as the main body and remaining security elements move. The halted unit is in position to support the moving unit by fire or fire and movement. This method puts the burden of control with the convoy commander, and provides maximum security while minimizing speed. Bounding requires maximum dispersion between security serials. There are two methods of bounding security elements, successive and alternate.

(1) Successive. Security units stay in place until follow on security units relieve them, in effect bumping them forward.

(2) Alternate. Security units from the rear push past the security units that are halted and assume overwatch positions forward, in effect "leap frog".

d. Open/Closed/Infiltration Column - Open column and closed column refer to the amount of dispersion used by serials. In open columns vehicles are 80 to 100 meters apart. This method provides protection from attack. However, if an attack occurs, it becomes difficult to concentrate firepower on the enemy. In closed columns vehicles are less than 80 meters apart. This method provides ease of control and is preferred at night. The disadvantage of the closed column is that it creates an easier target for the enemy. The infiltration column is the movement of dispersed, individual units or vehicles at irregular intervals. Infiltration reduces traffic density and prevents undue massing of vehicles. It provides passive defense against enemy observation. Additionally, it can also be used when time and road space and when security, deception, and dispersion are desired.

e. Staggered (Frogger). Random lane switching when traveling along known danger areas and among civilian vehicle traffic creates a difficult target for IED triggermen. The Convoy Commander can initiate a TTP known as "Frogger". Vehicles begin a random switching of lanes, acceleration, and deceleration while maintaining good dispersion. While this may seem a simple, common sense tactic, many convoys fall prey to only maintaining a steady pace in one lane and rarely deviate from their formation, adding to their vulnerability. Frogger is unique to the Marine Corps and is referred to as "Staggering" in U.S. Army doctrine. This method is described in detail in Ch IV, OIF II TTPs.

<i>Type Formation</i>	<i>When Used</i>	<i>Vehicle Density per mile/km</i>	<i>Speed mph/kph</i>	<i>Advantages</i>	<i>Disadvantages</i>
Close	Night, poorly marked routes areas of congestion	67/40	10/16	Full traffic capability of road can be used. Control is better. Fewer guides, escorts, and route markers are needed	Dispersion Difficult Easily detectable Requires careful scheduling and control to avoid blocking intersections. Driver fatigue.
Open	Daylight	20/12	15/24	Less chance of enemy observation or attack. Cargo moves faster. Driver fatigue is reduced, fewer accidents, very flexible.	Control is difficult. Full traffic capacity of the route is not used. Drivers can get lost.
Infiltration	Daylight, congested areas. Heavy traffic crosses the route	10/6	Various	Provides maximum security and deception. High speeds are possible. Other traffic has little effect on individual trucks. Does not hinder cross traffic.	More time required to complete the move. Column control is nearly impossible. Drivers can get lost. Specific details must be provided to each driver. Requires experienced drivers. Orders are not easily changed. Unit cannot be redeployed as a unit until all vehicles arrive.

Table 4-1: Dispersion Techniques for Columns

4005. Road Movement Planning. When planning for convoy operations, commanders need to keep in mind that the MAGTF may be operating under the organizational control and procedures established by other services or other nations, especially when conducting joint and combined operations. Therefore, a basic discussion of movement control that is common among all services will be discussed herein.

a. Distance Factors. Factors associated with distance can be expressed in miles, yards, feet, kilometers or meters. An understanding of this and how it relates to a convoy will help the convoy commander plan for effective movement control of the convoy and effective dispersion control between vehicles and elements of a convoy.

(1) Length. The length of any column or element of a column is the length of roadway, which it occupies, measured from front to rear. Length will also apply to a single vehicle.

(2) Road Space. Road space is the total length of a roadway occupied by a column or element

thereof, and any space added to the length that may be required for safety or to maintain flexibility.

(3) Gap. Gap is the space between elements or successive vehicles in a column or between successive columns as measured from the rear of one element to the front of the following element.

(4) Lead. Lead is the linear spacing between the heads of elements in a column or between heads of successive vehicles, serials, march units or columns.

(5) Road Distance. Road distance is the distance from point to point by road, usually expressed in kilometers or miles.

(6) Road Clearance Distance. Road clearance distance is the total distance that the head of a column must travel for the entire column to clear a given section of the road.

b. Time Factors. Time factors are utilized to gauge the relative positions and the arrival and/or passage of elements of a march. They are expressed in hours, minutes, and seconds. Convoy commanders and movement planners must be able to tell what time a motor column will pass a particular place on the route and how long it will take to get from one place to another.

(1) Pass Time (Time Length). Pass time is the time required for a column or element thereof, to pass a given point. This can be applied to single vehicles.

(2) Time Gap. The time measured from the rear of one vehicle and the front of the next vehicle or element as they move past any given point.

(3) Time Lead. Time lead, otherwise known as headway, is the time measured between the head of one element or vehicle and the head of the next as they pass a given point.

(4) Time Distance. The time required moving from one point to another at a given rate of speed.

(5) Road Clearance. The total time a column or element thereof requires traveling over and clearing

either a section or all of a road. Road clearance time equals time distance plus time length.

(6) Time Space. The time consumed while a column or element thereof proceeds past any point in route. It includes time gaps between subordinate elements and any additional time added for safety or flexibility.

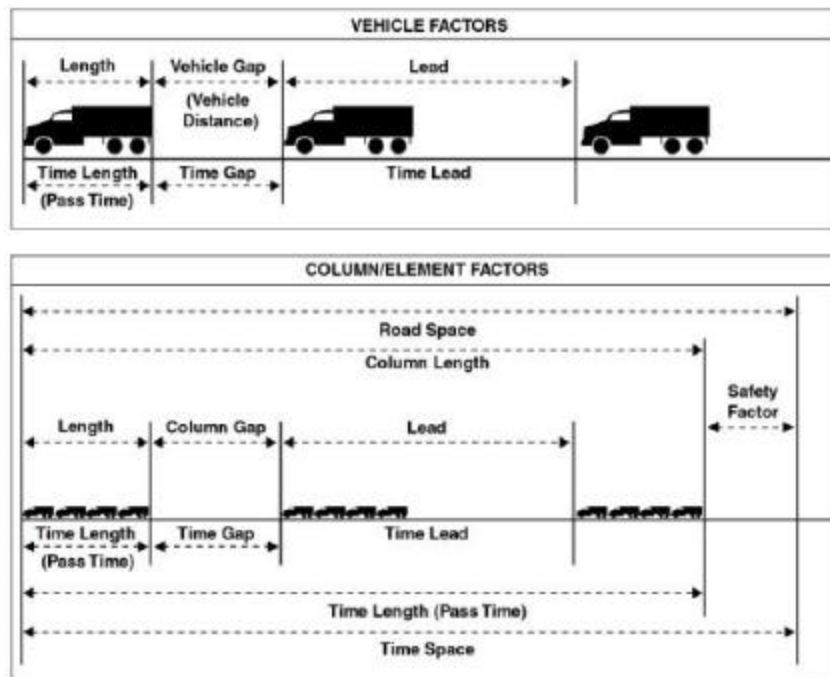


Figure 4-2: Distance and Time Factors, Vehicle and Column/Element

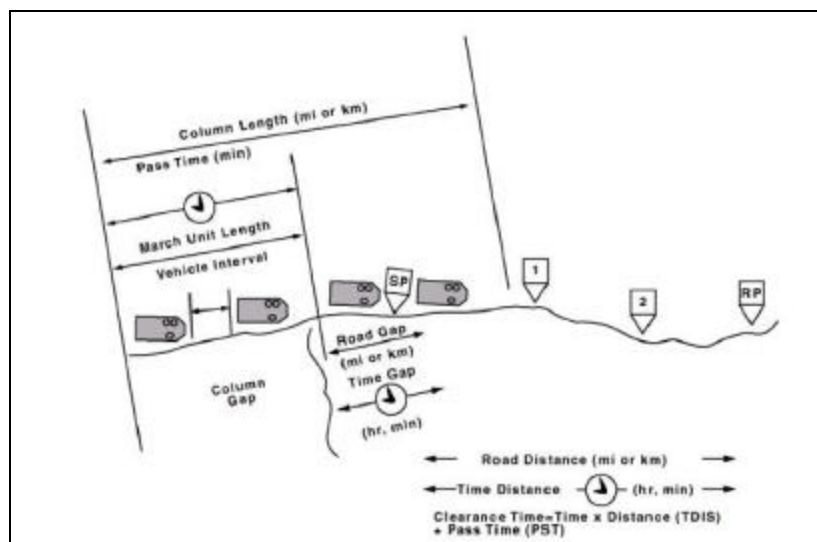


Figure 4-3: Clearance Time

c. Measuring Movement. Movement is measured by determining how long it takes to move a given distance. We express this in kilometers or miles per hour. We express rates of movement through speed, pace, and rate of march.

(1) Speed. Speed is the actual rate at which a vehicle is moving at a given time.

(2) Pace. The regulated speed of a column or element as set by the lead vehicle. Pace is adjusted to suit road conditions, terrain, traffic and weather conditions.

(3) Rate of March. The average number of miles traveled in any specific time period. It includes short periodic halts and delays. It does not include long hauls such as RON stops.

d. Determining Distance, Rate, and Time. Distance (D), rate (R), and time (T), work together to form a simple arithmetic formula that can facilitate road movement planning:

(1) $D = R \times T$ (distance equals rate multiplied by time).

(2) $R = D/T$ (rate equals distance divided by time).

(3) $T = D/R$ (time equals distance divided by rate).

e. Higher Headquarters Planning. Normally the convoy commander will have to prepare and provide the convoy's movement plans to higher headquarters. In turn that headquarters will coordinate with other headquarters in order to deconflict with other convoys moving within the same geographical area. For the Marine Corps, this is normally done between movement control centers at different levels of command. At the lowest tactical level, movement control is facilitated through a movement control center that is normally part of the unit's operations center. At the division and MEF level a theater movement control center (TMCC) is established having the responsibility to plan for and deconflict all movements taking place in an area of operations (AO). These organizations will use

doctrinal tools to help coordinate and track these movements. Below is an example and explanation of these tools:

(1) Convoy Threat/Decision Matrix. One effective tool used successfully in OIF convoy planning is the Convoy Threat and Decision Matrix. This tool assists the commander by identifying threats to convoy operations and allocates assets, personnel and actions to mitigate threats.

Convoy Threat Matrix		
-DESERT/ NO INCIDENTS	GREEN	PERMISSIVE
-BORDER XING, SMALL VILLAGES / RURAL ISOLATED/OCCASIONAL IEDS FOUND/DET (3-7) NO COMPLEX ATTACKS	YELLOW	SEMI-PERMISSIVE
-HIGH SAFIRE INCIDENT DENSITY (RECENT) -COMPLEX IED/ SM ARMS/RPG ATTACK 7 OR MORE IEDS FOUND/DET /WEEK /URBAN	RED	NON-PERMISSIVE
-HIGH DENSITY URBAN MULTIPLE COMPLEX IED/RPG/SMALL ARMS ATTACKS /HIGH SAFIRE LAST 7 DAYS SPECIAL EVENTS	BLACK	DANGER AREA

Figure 4-4: Example Convoy Threat Matrix

a. Convoy Threat Matrix. Higher headquarters assesses the threat along routes and assigns color codes based on frequency of attacks, type of attacks, and terrain. Through the use of this matrix commanders can assign colors to threat values. Colors will then be assigned to routes corresponding to the commander's threat values. Once routes are assigned a color code, commanders determine convoy requirements to mitigate threats. *Figure*

4-5 shows an example of a Commander's requirements to travel a colored route.

Convoy Threat Decision Matrix				
	Threat			
DAY/NIGHT	(GREEN) DAY OR NIGHT	(YELLOW) URBAN -- NIGHT RURAL - DAY ALLOWED* *(NIGHT PREFERRED)	(RED) NIGHT	(BLACK) NIGHT
RING MT VEH	1/10	1/10	1/5	1/5
CREW SERVED WEAPONS	1/3 RECOMMEND SQUAD (rein) 1 ACOG min	1/3 DISMOUNT CAPABILITY Plt (-) 4 ACOG	1/3 DISMOUNT CAPABILITY Plt (6 ACOG)	1/3 DISMOUNT CAPABILITY Plt (rein) (8 ACOG)
ARMOR	100% (1 UA HMMWV min)	100% (1 UA HMMWV min)	100 % (2 UA HMMWV min)	100% (2 UA HMMWV min)
SECURITY	SELF PROTECT	REC GROUND SWEEP 6 HRS PRIOR	REC GROUND SWEEP 3 HRS PRIOR	REC GROUND ESCORT FAC/JTAC
EOD	ON CALL	REQUEST IMBEDDED	REQUEST IMBEDDED	REQUEST IMBEDDED
AVIATION ESCORT	NONE REQUIRED	RW ATTACHED	RW DAY DETACHED /NIGHT ATTACHED	RW DETACHED
MIN/MAX SIZE	15/30	15/30 (20 MAX NIGHT)	15/20	15/20
RADIOS/C3	VHF/INTRA CONVOY/ 2 T / 2 IR MIN /MK 145	VHF/INTRA CONVOY/ 3 T / 2 IR MIN / MK 145	VHF/INTRA CONVOY/ 3 T / 2 IR MIN / BFT / MK 145	VHF/INTRA CONVOY/ 3 T / 2 IR MIN / BFT / MK 145
CORPSMAN	2 / 15 VEHICLES	2 / 15 VEHICLES	2 / 15 VEHICLES	2 / 15 VEHICLES
ISR	SWEEP RECOMMENED EVERY 7 DAYS	SWEEP RECOMMENDED 6 HOURS PRIOR	SWEEP RECOMMENDED 2-4 HOURS PRIOR	SWEEP RECOMMENDED 1-4 HOURS PRIOR
SCHEDULE /CHOP	96/48	96/48	96/48	120/72
APPROVAL WAIVERS FROM	REG/GROUP/CSSG CO NEXT HIGHER	REG/GROUP/CSSG CO	REG/GROUP/CSSG CO	DIV/WING/FSSG CG

Figure 4-5: Example Convoy Threat Decision Matrix

b. Convoy Threat Decision Matrix. The left column is the list of Commanders requirements for a convoy to travel any route. Colors for each column are derived from figure 4-4. Threats are listed from left to right with the least threat on the left (GREEN) and the most significant threat on the right (BLACK). The minimum requirements to travel a colored route are listed in corresponding blocks and relate to assets/actions for the convoy.

(1) Road Movement Graph. The road movement graph is prepared with a vertical axis that represents distance, and a horizontal axis that represents time. In the left margin of the scale the movement planner will plot critical points at their respective distance from the start point of a convoy movement. Each horizontal line within the graph represents 3 kilometers of distance. Each vertical within the graph represents 12 minutes of time.

Planners can plot all aspects of a movement onto this graph.

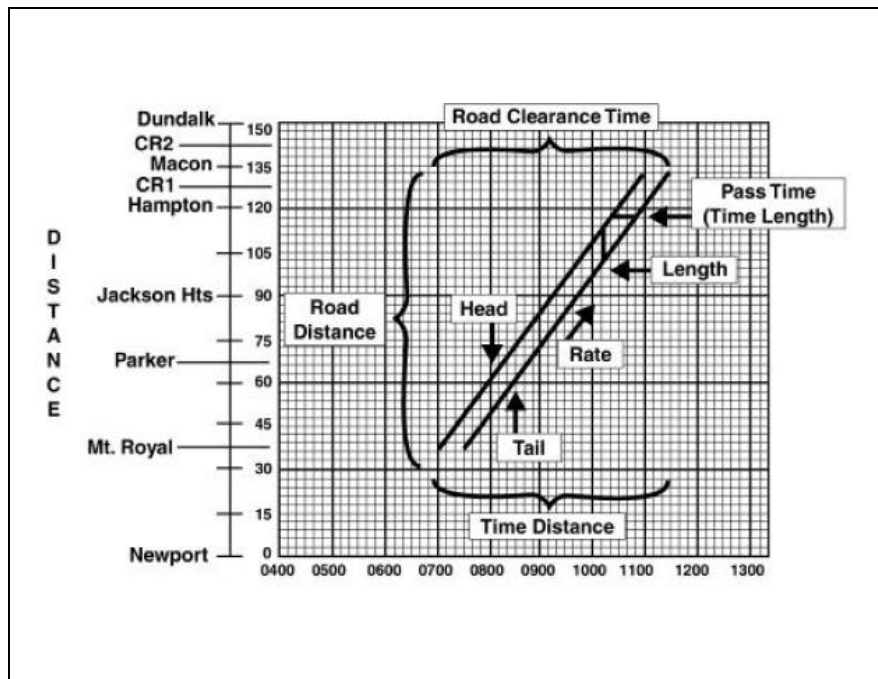


Figure 4-6: Example Road Movement Graph

In the graphic above, where the head of the convoy crosses a SP at 0700 and the tail (trail) crosses 0736 the time length of this convoy can be determined to be approximately 36 minutes with a total length of 14 kilometers. To determine the Time Distance, pass time and required road space the planner will utilize the formulas below keeping in mind that $D = R \times T$:

$$\text{road space} = \frac{\# \text{ of vehicles}}{\text{density}} + \frac{\text{time gaps} \times \text{rate}}{60 \text{ (minutes)}}$$

$$\text{pass time (time length)} = \frac{\text{road space} \times 60}{\text{rate}} + \frac{\text{Extal}}{\text{rate}}$$

$$\text{time distance} = \frac{\text{distance}}{\text{rate}}$$

(2) Critical Time and Points Graph. The TMCC will normally collect all movement information for convoys operating within an AO for a specified period of time. This information can be plotted on a critical time and point graph in order to consolidate information and help solve potential conflicts along critical points. It consists of a separate graph chart for each identified critical point. The period of occupation of each numbered critical point can be taken from the road movement graphs of units using the road network during the same period. As information is plotted potential conflicts will emerge. In the example below CR 25 is occupied by a column moving east for approximately 15 minutes (pass time). The same column will be occupying CR 26 from 0130 to 0145 upon which it will change direction to the north and ultimately occupy CR 35 from 0245 to 0300. As additional CR occupation by other convoys is plotted, potential overlaps can be identified which may cause and adjustment in the departure times or directing shifts to less occupied routes.

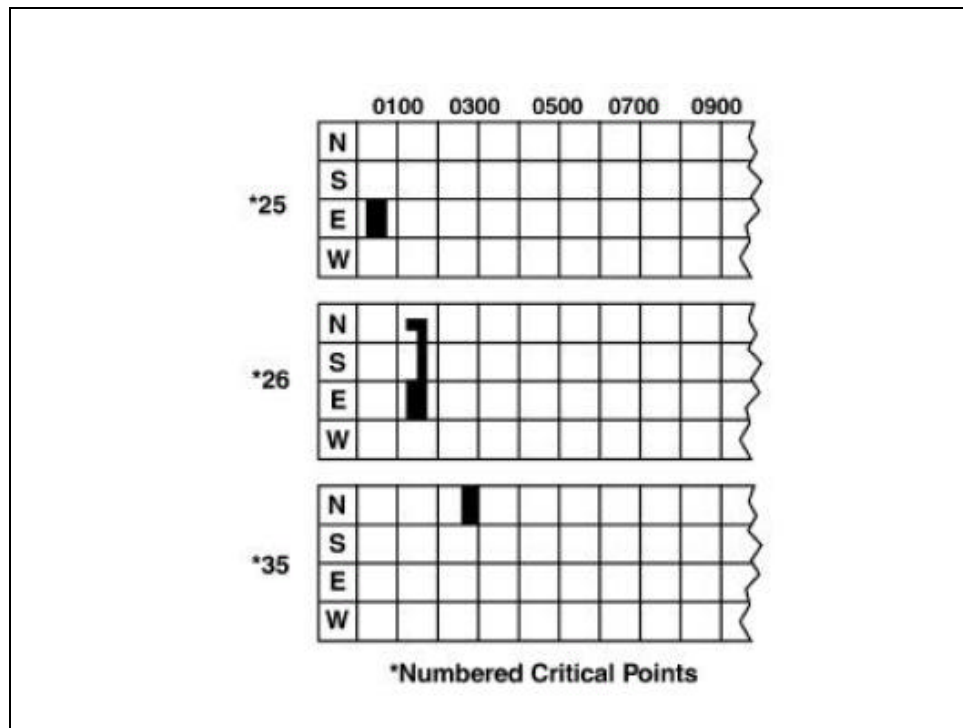


Figure 4-7: Example Critical Time and Point Graph Displaying One Column

(3) Extra Time Allowance (Extal). Movement planners will factor in Extal as required based on the size of a convoy. The table below represents basic Extal planning factors:

Number of Vehicles	Amount of Extal (minutes)
25 or fewer	0
25-37	1
38-62	2
63-87	4

Table 4-2: Extal

4005. Night Movement. Careful considerations must be given when deciding on whether to conduct a move at night. Unlike a daylight move, command and control becomes more difficult. Regardless, night movements may be a requirement due to tactical situations and the enemy threat in order to accomplish the mission.

a. Considerations. The following considerations should be applied when conducting a night movement:

(1) Keep convoys small.

(2) Restrict movement to road networks that operators are familiar with.

(3) Use one-way road networks to the greatest extent possible.

(4) Tow disabled vehicles vice repair on the spot.

(5) Shift lanes and turn lights off when crossing under overpasses.

b. Blackout Marker Lights. These lights are provided on all military tactical vehicles in order to provide operators a means of determining interval and spacing under blackout conditions. They are not intended to illuminate the road but indicate vehicle position in a convoy up to 750 feet, dependant on weather conditions.

(1) Tail Lights. Rear lamps are equipped with a pair of "cat's eyes" that show red when activated. From a distance of 60-180 feet each pair will appear as one red light. At 60 feet or less two cat's eyes will appear in each lamp. One point of view shows vehicles being too far ahead and another indicates proper interval. Four lights displayed indicate a driver being too close to another vehicle.

(2) Front Lights. Each front light on a vehicle has one pair of cat's eyes that will show white when activated. From a distance of 60 feet or more each appears as one light. From a distance of 60 feet or less one pair of cat's eyes shows in each light.

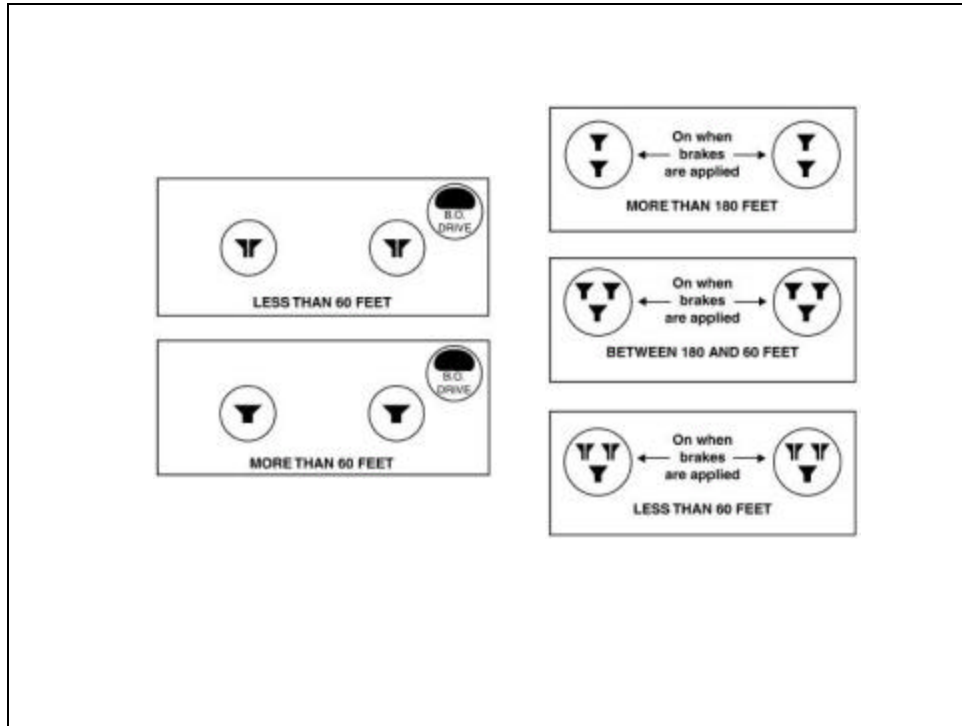


Figure 4-8: Blackout Marker Lights

(3) Deceptive Lighting Techniques. Vehicle commanders should plan on covering lights on vehicles (situation dependant) in order to break up the uniform look and outline of a convoy traveling at night.

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Chapter Five

Tactics, Techniques, and Procedures

5001. Battle Space Geometry Measures. Probability of convoys being ambushed is an ever-increasing threat that convoy commanders need to plan for each time they conduct a road march. Actions taken to mitigate and react to those threats must be deliberate and immediate. However, just as a commander plans fires with maneuver when assaulting an objective, he must also consider the same battle space geometry measures when reacting to an enemy ambush. Convoy commanders must account for the disposition of other friendly elements, to include the local populace, in the area. Convoy commanders must understand the capabilities of the enemy's weapon systems. We must take into account the Rules of Engagement (ROE) for a specific area of operations and the degree of collateral damage that we are authorized. The convoy commander and personnel assigned to a convoy should have an understanding of their ordnance minimum safe distances (MSD), gun target lines (GTL), and surface danger zones (SDZ). When aviation is used in support of convoy operations, all must readily understand battle positions, fixed wing stay above/stay below must be articulated to and understood by FIST teams, and final attack headings and rotary wing routing must be clear and concise.

a. Ordnance Minimum Safe Distance (MSD). The minimum safe distance personnel must be from indirect or aviation delivered ordnance before risking fratricide.

b. Gun Target Lines (GTL). GTL is an imaginary line drawn from an active weapon system to a target.

c. Surface Danger Zone (SDZ). SDZ is the vertical and horizontal space that is used to ensure containment of all projectiles and fragments from indirect, direct and aviation delivered weapons.

d. Rotary Wing Battle Position (BP). Normally a 2-kilometer by 2-kilometer area the helicopter can operate from as it is attacking a target.

e. Fixed Wing Stay Above/Below. A doctrinal term used to control the simultaneous engagement of a target with direct, indirect, and aviation assets.

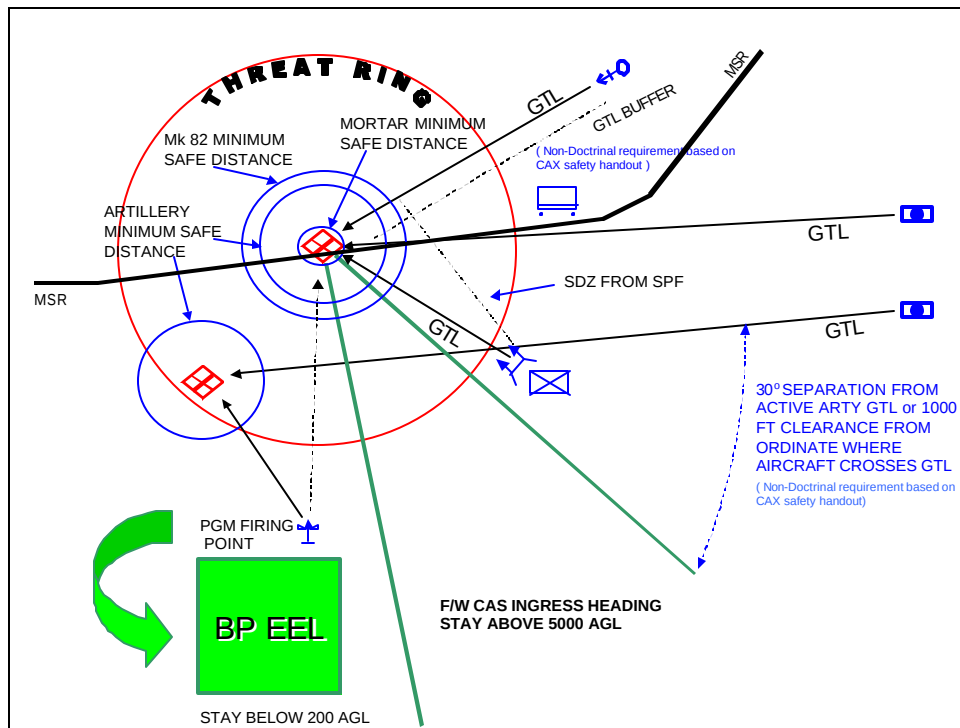


Figure 5-1: Battle Space Geometry Measures

5002. Fires Planning. The convoy commander must plan for the employment of all available fire support assets. The assets include the convoy's organic direct fire weapons systems, available RWCAS and FWCAS and any indirect fire coverage (Artillery and Heavy Mortars) along the intended route of march. Since convoys will typically be moving over great distances, and through multiple unit boundaries (likely without a fire support assets), fires planning can become an exercise in knowing exactly where the convoy is on the route and what assets/capabilities are available to support the convoy when/if they come under enemy attack. Key consideration must be given to the intelligence estimate to assist in identifying known areas of enemy resistance and current enemy TTPs. These likely engagement spots become critical points or triggers (CR) for the convoy. They can be associated with a geographic location but they can also be event driven. The convoy commander should plan his fires in order to reduce or mitigate the threat posed to the convoy at the critical point (CR).

a. Fire Support Planning Tasks. Once the convoy commander has determined what fire support assets are available (see Appendix M), he must accomplish the following:

(1) Determine which friendly unit AO's will be crossed by the convoy route.

(2) Annotate friendly unit boundaries.

(3) Make liaison with each unit FSCC regarding fire support policies in each AO.

(4) Determine who will be clearing fires in each AO.

(5) Determine fire support communications requirements for each AO.

(6) Annotate all Fire Support Coordination Measures (FSCMs) along the convoy route*.

(7) Determine ROE for engaging targets.

(8) Annotate any restricted targets on the convoy route (tied to ROE).

(9) Determine which CGRS and Killbox cells and keypads are active on the convoy route**.

(10) Plan targets and target reference points (based off information from S-2).

a. Targets numbers are allocated by unit (See your S-3).

b. Each target receives a separate target number.

c. Submit targets via Target List Worksheet - min 24-hr prior.

d. Annotate approved targets on convoy route map.

e. Pre-plan fire support mission cards for execution.

(11) Plan for primary and alternate initiators of fires (CC and SEL).

(12) Plan for primary and alternate fire support asset, wherever possible.

(13) Determine whether "deception fires" are required for the mission.

(14) Brief and coordinate with HHQ elements for all planned fire support (e.g. Priority Targets, priorities of fire (POF), etc.).

***Note: Further information on fire support coordination measures can be found in MCWP 3-16, Appendix B.**

**** CGRS/Killbox information can be very useful in quickly focusing a fixed wing pilot onto the area where the convoy needs him. CGRS/Killbox information can found by contacting MEF Force Fires/Effects Coordination Center.**

b. Target Location Equipment. The convoy commander should carry the following equipment to aid in target location, and routinely drill/maintain proficiency with this equipment:

(1) Some type of laser range finder or other type of range finder (off the shelf).

(2) PLGR/GPS

(3) Compass

(4) MAP

c. Marking Tools. Friendly and enemy locations can be marked with the following tools in the employment of CAS:

(1) VS-17 Air Panels.

(2) IR pointers.

a. PEQ-2A on an M-16.

b. IZLID (Infra-red Zoom Illuminator/Designator) II or 1000.

c. GCP (Ground Commander's Pointer).

d. MPLI (Medium Power Laser Illuminator or PEQ-4).

(3) Pyrotechnics (including 40mm from M203).

(4) Tracers from crew-served weapons.

d. Fires Planning Rehearsals. Finally, convoy commanders must rehearse the fire support plan with every member of his convoy (at a minimum with the Asst convoy commander and Security Force Leader) in order to effectively employ fires in support of his convoy. Call for fire and CAS briefs must be practiced until the information conveyed is clear and automatic, and the convoy commander is proficient in all skill sets relating to fire support. Some recommended CFF missions are adjust fire (AF), fire for effect (FFE), immediate suppression, and Priority Targets. The MCWP 3-16 and 3-16.6 are the doctrinal reference publications for more detailed fire support planning.

5003. Aviation Planning and Integration

a. Aviation planning/integration should be accomplished by a qualified FAC (Forward Air Controller) or JTAC (Joint Terminal Attack Controller) assigned to the unit. The FAC/JTAC or convoy commander in their absence, should consider the following: Pre-planned and Immediate Aviation Fires.

(1) Pre-planned. Accomplished via Joint Tactical Air Request (JTAR) submitted greater than 72 hours prior to convoy movement and specifying the escort requirement in support of the convoy. Amplifying information includes: scheme of maneuver; number of vehicles in the convoy; routes; checkpoints, geographic reference points; communications plan; and unit SOPs (convoy actions on contact; CASEVAC plan; signal/no-communications plan).

(2) Immediate. Accomplished via immediate request for aviation support through the Direct Air Support Center (DASC) or Tactical Movement Coordination Center (TMCC).

(3) Communications for these requests can be accomplished through established convoy control nets

(Convoy Common), air support nets (Tactical Air Direction (TAD)), GUARD, text messaging using Blue Force Tracker/FBCB2, or even via cell phone.

b. If there is no FAC/JTAC, the convoy commander may delegate aviation support planning and execution to the Security Element Leader or Assistant convoy commander.

c. Planning Considerations. Aviation support for convoy operations should be determined through a careful analysis of the threat, primary threat areas, planned/required coverage and types of aircraft available. During movement, aviation assets can provide an attached or detached overwatch of the convoy, as well as reconnaissance of routes, identify suspicious activity and chokepoints/obstacles, monitor progress, provide direction and relay information. If required they can also intimidate the enemy using a "show of force" or provide reactive or precision suppression of enemy targets.

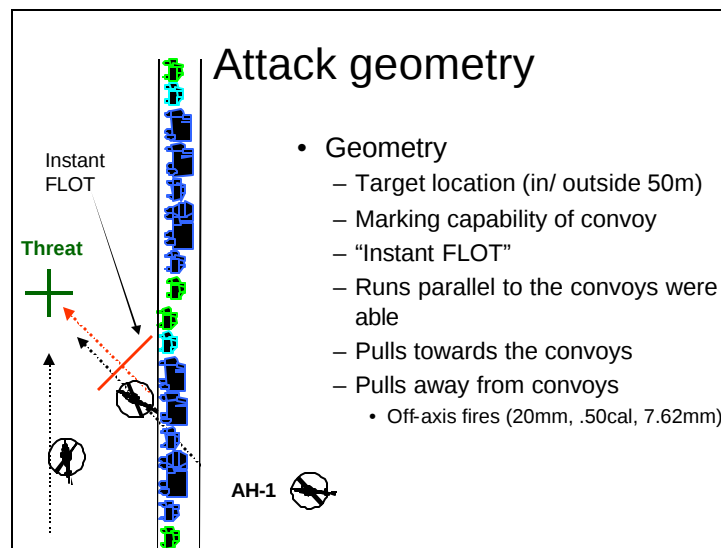
d. Convoy Escort Execution. When aircraft arrive on station to escort the convoy they will provide their callsign, number and type of aircraft, position and altitude, ordnance and time on station. The FAC/JTAC, convoy commander or designated air representative should evaluate these capabilities and timeline to ensure that they meet their requirements during the execution of the convoy. Following aircraft check-in the designated air representative should provide the following to the escort aircraft:

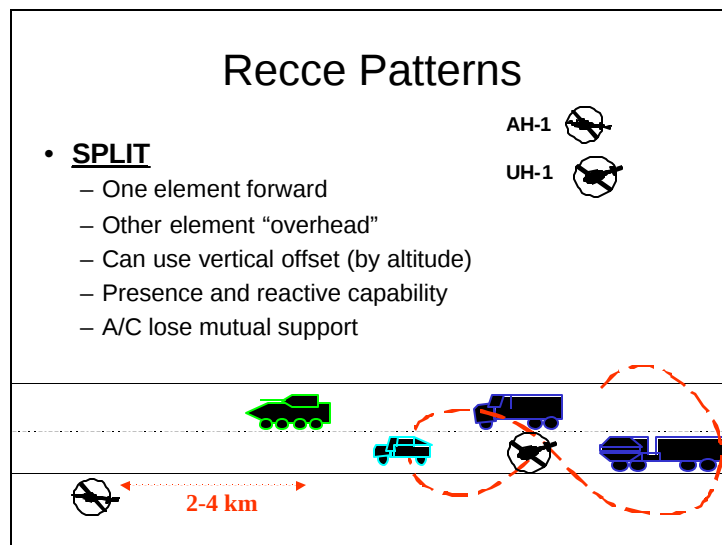
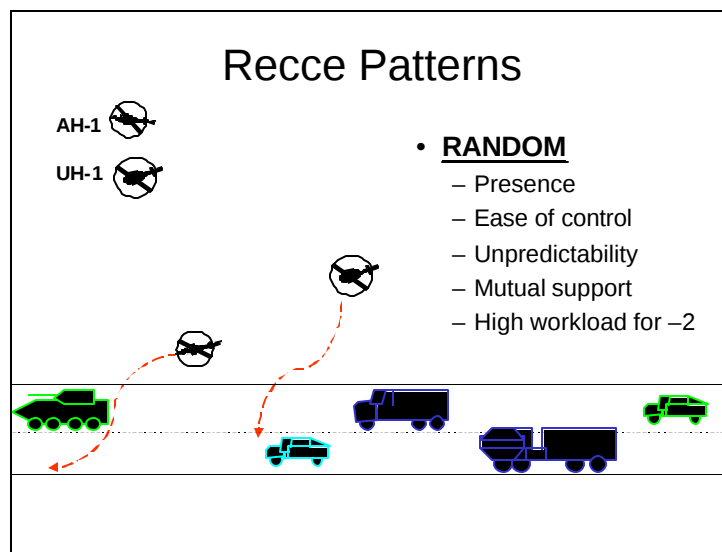
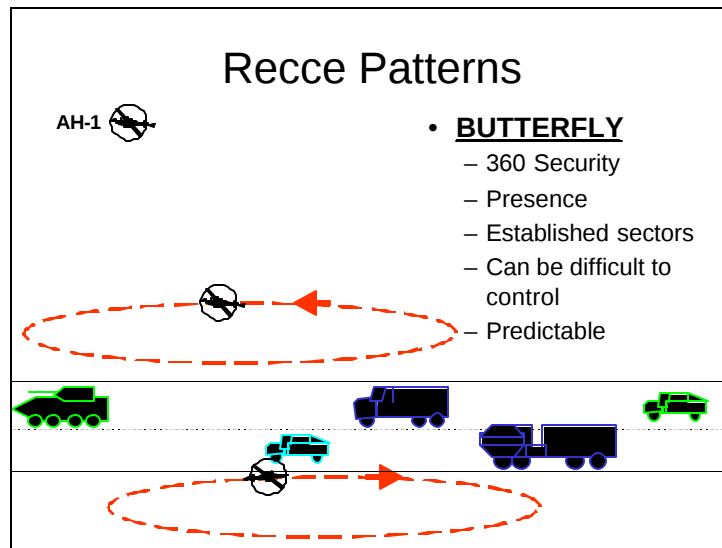
- (1) Callsign
- (2) Number and type of vehicles
- (3) Location, route, destination
- (4) Time enroute
- (5) Organic Weapons
- (6) Whether a FAC or JTAC

This information allows aircraft to visually identify and monitor the convoy and prepare for actions in the event of enemy contact.

e. If the convoy possesses a qualified JTAC, the escort aircraft will assume a Close Air Support role during enemy contact. If no qualified JTAC is with the convoy then the aircraft will maintain an Escort role while monitoring the convoy and provide fire support when required based on their situational awareness during the enemy engagement.

f. Rotary wing escort coverage involves flight profiles that will screen two to four kilometers (METT-T dependent) around the convoy's front, rear and flanks. The aircraft will likely fly a butterfly, random or split pattern over/around the convoy during movement. In the event of attack, the attack helicopters could make firing runs perpendicular, oblique or parallel to the convoy's direction of travel. Ordnance selection will depend on enemy location and situational awareness to friendly positions and might only involve a "show of force" depending on the situation.





g. Fixed wing escort coverage involves flight profiles that may be attached (visual) or detached to the convoy. The aircraft will likely fly large orbits overhead or offset from the convoy and at an altitude that maximizes coverage and time on station. These assets may provide reconnaissance using different type sensors and could be as simple as a visual route recce. In the event of attack the first course of action will likely be a "show of force" with runs perpendicular, oblique or parallel to the convoys direction of travel. Ordnance employment would then be dependent on situational awareness of friendly and enemy positions and may include reactive suppression or precision targeting of specific enemy locations.

h. FAC/JTAC, convoy commander or the designated air representative should have knowledge of basic CAS procedures to include 9-line brief for fixed/rotary-wing aircraft, 6-line brief for rotary-wing aircraft, and the mechanics of a visual "talk-on" (big to small, anchor, unit of measure, and walk to target). Regardless of the brief format, these personnel should realize the most essential elements of information for aircraft situational awareness are the friendly position and enemy location. This information can usually be obtained by maintaining situational awareness of the convoy location using a map or PLGR and can always be passed in its simplest form via orientation to the road network and convoy followed by enemy location relative to the friendly location.

i. Friendly locations can be marked with air panels, IR strobes and pointers, and enemy locations can be marked with tracer fire, smoke grenades (M203) or IR pointers.

j. The FAC/JTAC, convoy commander or aviation representative should be prepared to provide approval (non-JTAC) or clearance (FAC/JTAC) for aircraft to engage enemy targets in conjunction with the planned scheme of maneuver, and when aircrew have obtained the requisite direction and situational awareness to proceed safely.

5004. Immediate Action Drills

a. React to Ambush (Near/Far) Unblocked. Dependant upon guidance from higher headquarters a convoy commander that is ambushed along an intended route may have guidance to push through the kill zone or stop and assault the enemy.

This TTP will focus on the more difficult of the two, which is the assault.

(1) Upon entering a kill zone those vehicles affected will report over convoy tactical net contact (location) and return a high volume of suppressive fire in the direction of the ambush in an attempt to immediately gain fire superiority.

(2) Gun trucks or dedicated escort will maneuver to a covered position and pick-up suppression via a support by fire (SBF) location that places them between the enemy and the convoy; normally to the near side and far side of the kill zone if possible. The CC will retain control of the convoy and continue to move them out of the kill zone, under the effects of friendly suppression, to a preplanned rally point.

(3) Armed convoy vehicles will augment suppression as they push through the kill zone, keeping in mind Battle Space Geometry (BSG) as it relates to the disposition of the convoy and the SBF positions.

a. It is imperative that a simple and clear signal plan be developed that signifies the direction of contact and the shifting/ceasing of fires for the convoy. Taillights, blinking on the side of the ambush, star cluster to shift/cease fires and smoke thrown in the direction of the enemy are common TTPs for signals in the event of an ambush.

(4) Damaged or disabled vehicles will be hooked up for recovery and moved out of the kill zone. If recovery is not possible due to enemy fires or degree of damage, the vehicle will be pushed off of the road and abandoned, ensuring that all sensitive equipment and information is either collected or destroyed. The CC will normally request permission from higher to abandon/destroy the vehicle(s).

(5) The SEL will provide SPOT/SALUTE reports to the CC and if necessary employ the convoy QRF or request reinforcement from indirect fires and air support if available. The SEL will choose one of three courses of action; continue to suppress the enemy while QRF moves to support, assault the enemy, or break contact and move out of the kill zone.

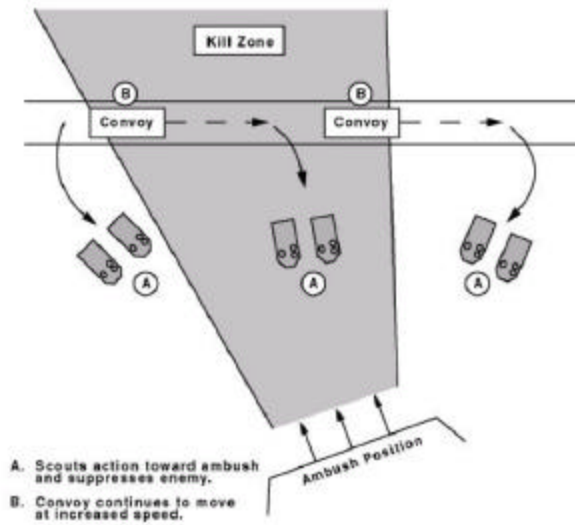


Figure 5-2: Example Convoy Security Escort Action Toward Ambush

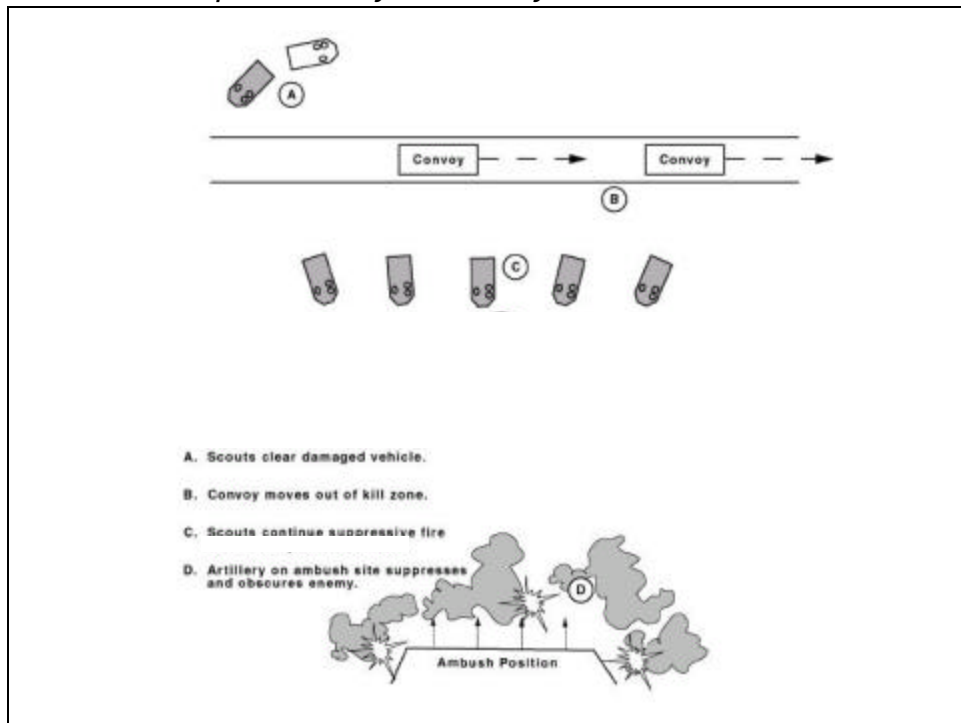


Figure 5-3: Example of Convoy Moving Through With Effective Suppression From Security Escort and With Indirect Fires Support

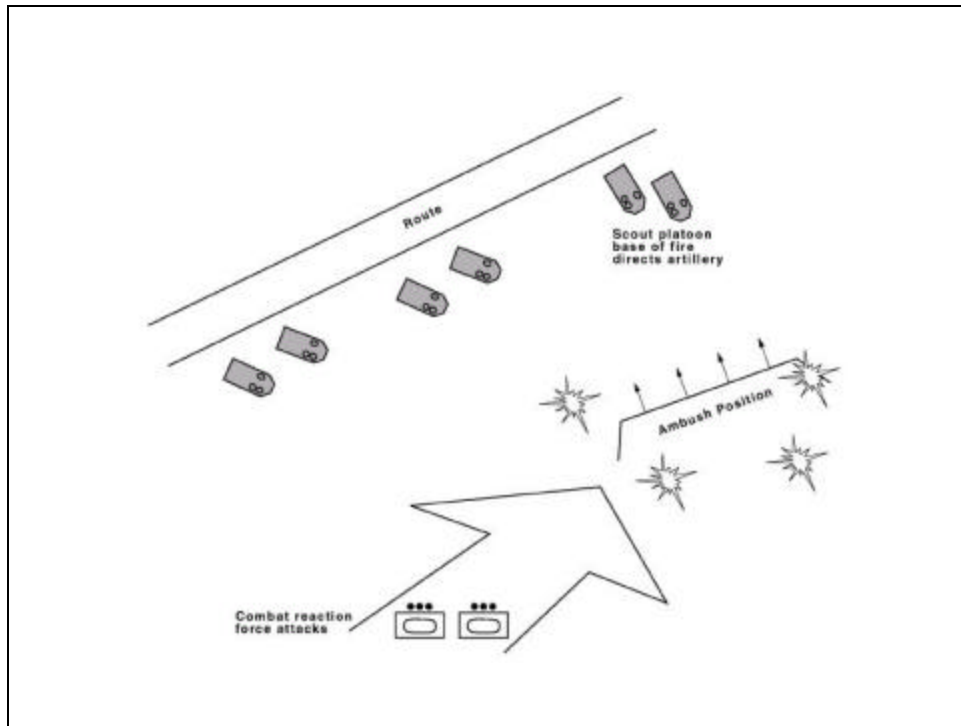


Figure 5-4: Example of Security Escort Continuing Effective Suppression While QRF Attacks From Flank

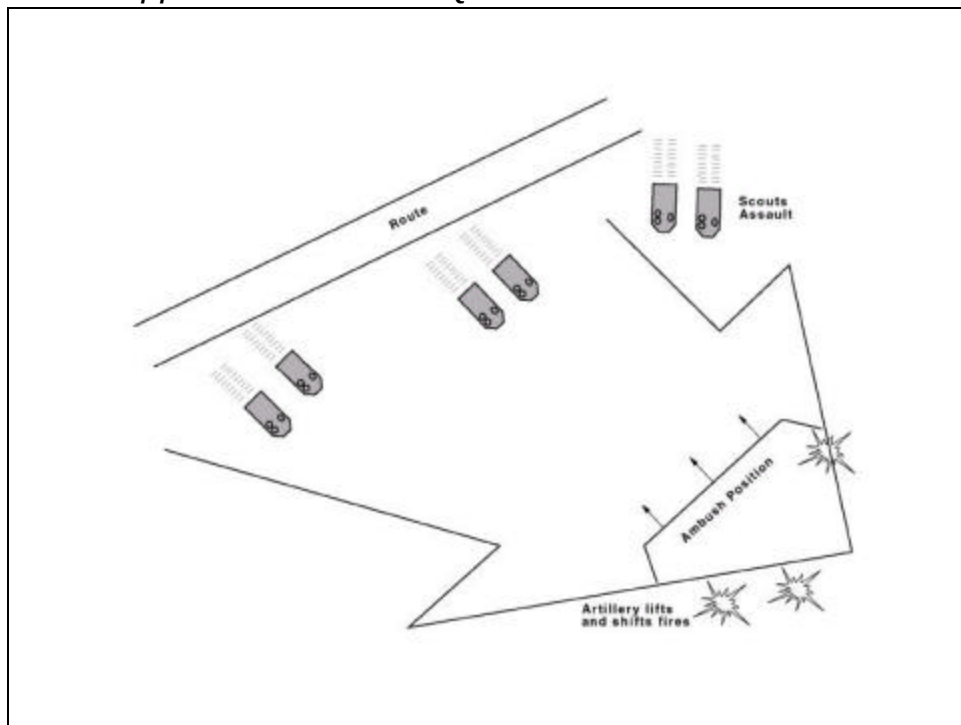


Figure 5-5: Example of Security Escort Conducting Mounted Assault with IDF Support Lifting and Shifting Fires (controlled)

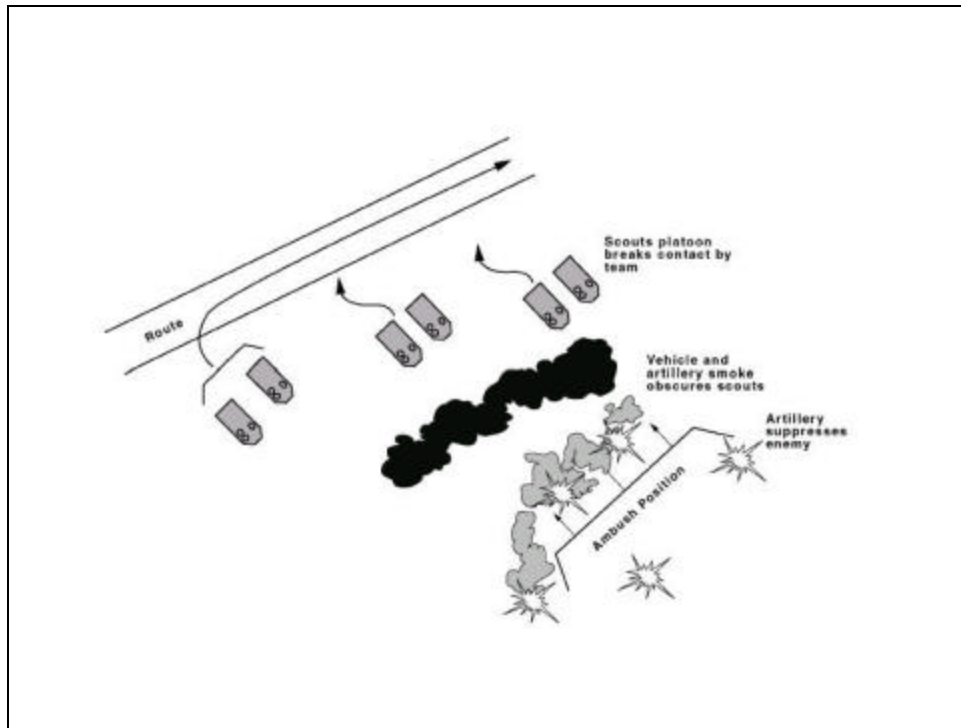


Figure 5-6: Example of Security Escort Conducting Break Contact Under Obscuration and IDF Support IOT Link Back Up With Convoy

b. Actions at an Obstacle. An enemy will use obstacles to harass, delay and stop a convoy in order to set the convoy up for an ambush.

(1) The lead security element that identifies the obstacle will inform the CC. The CC in turn will conduct a short halt of the convoy at the en route position of vehicles. All vehicles will establish local security.

(2) Upon assessment of the situation the CC will provide a SPOT report to higher headquarters and request QRF or EOD support if required and not organic to the convoy. The EOD 9-line format should be utilized if required. The CC will assume the obstacle is over watched and covered by the enemy.

(3) All vehicles that are within 300 meters of the obstacle will back off taking into account the potential for improvised explosive devices (IEDs) being combined with the convoy.

(4) Simultaneously, an obstacle clearing detachment (OCD) or reconnaissance team, with security, will move forward to assess the situation.

(5) If a mechanical breach can be performed on the obstacle it should be done, ensuring that the obstacle is not booby trapped prior to execution. If EOD support is available the area will be cordoned off until arrival. If not available, a TTP that may be employed is simply shooting at the obstacle with direct fire weapons. Permission from higher headquarters should be received prior to employing this TTP.

(6) Concurrently, security elements should begin a reconnaissance for a bypass while maintaining 360-degree security for the convoy.

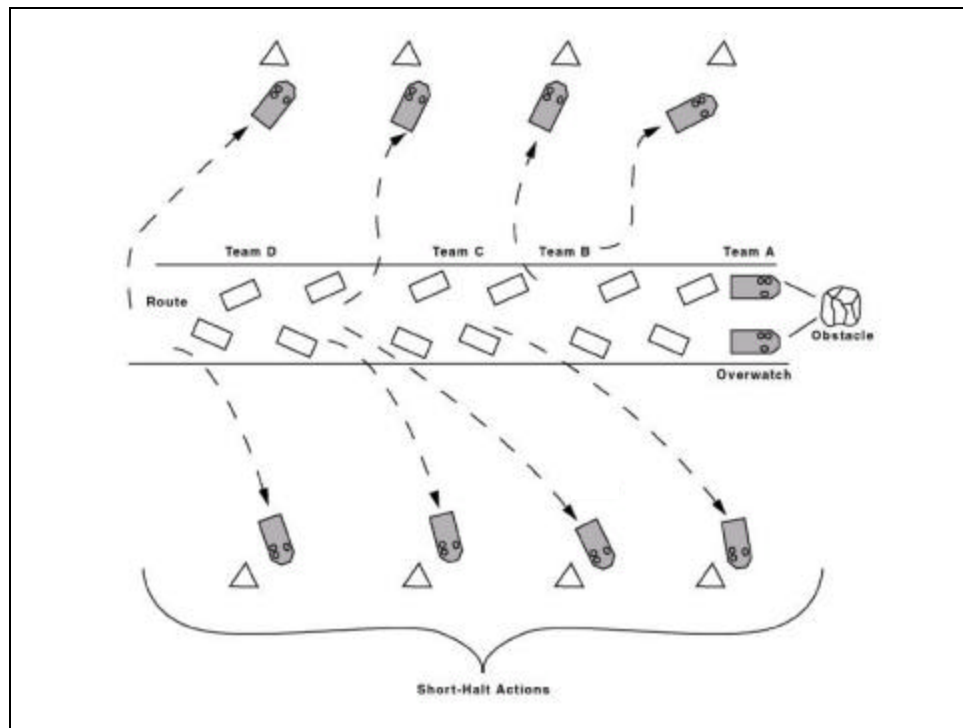


Figure 5-7: Example of Obstacle Over Watch by Security Escort

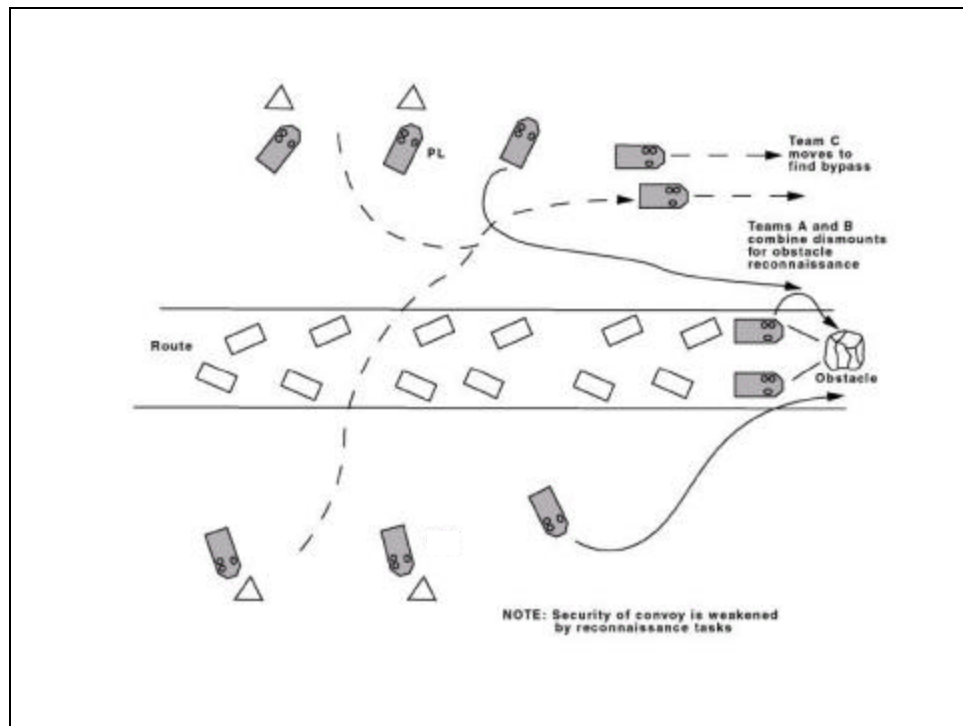


Figure 5-8: Example of Obstacle Reconnaissance With Security

c. Conduct Area Security

(1) Convoy assumes a staggered herringbone formation.

(2) Security vehicles organize around the convoy to provide 360-degree security, adjusting on likely enemy avenues of approach in a coil formation. Consideration must be given to moving off of hardball surfaces due to mines and IEDs. If the environment does not allow for moving off of hardball surface roads then security should take up position at the head, trail and body of convoy that allows for 360-degree security.

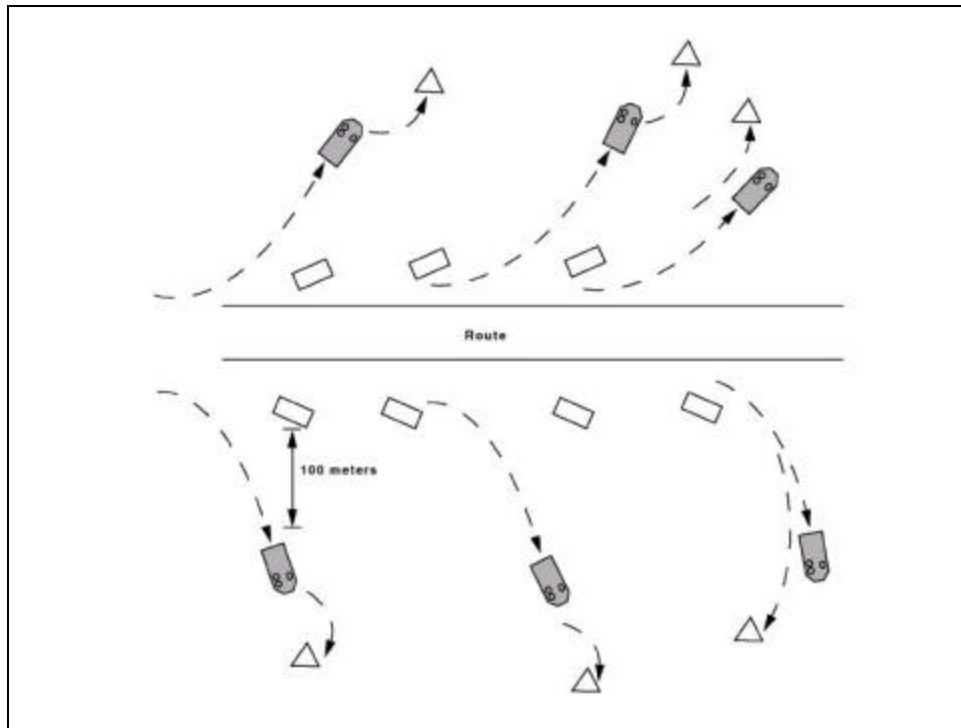


Figure 5-9: Example of 360-degree Area Security

d. Improvised Explosive Device. IEDs pose one of the greatest threats to a convoy in the asymmetrical environment. Quick reaction is essential because loss of life and limb may be at stake. Before understanding how to properly mitigate an IED attack, the CC should be knowledgeable of the enemy TTPs used with IEDs. The following examples provide a graphic representation of how the enemy may employ an IED.

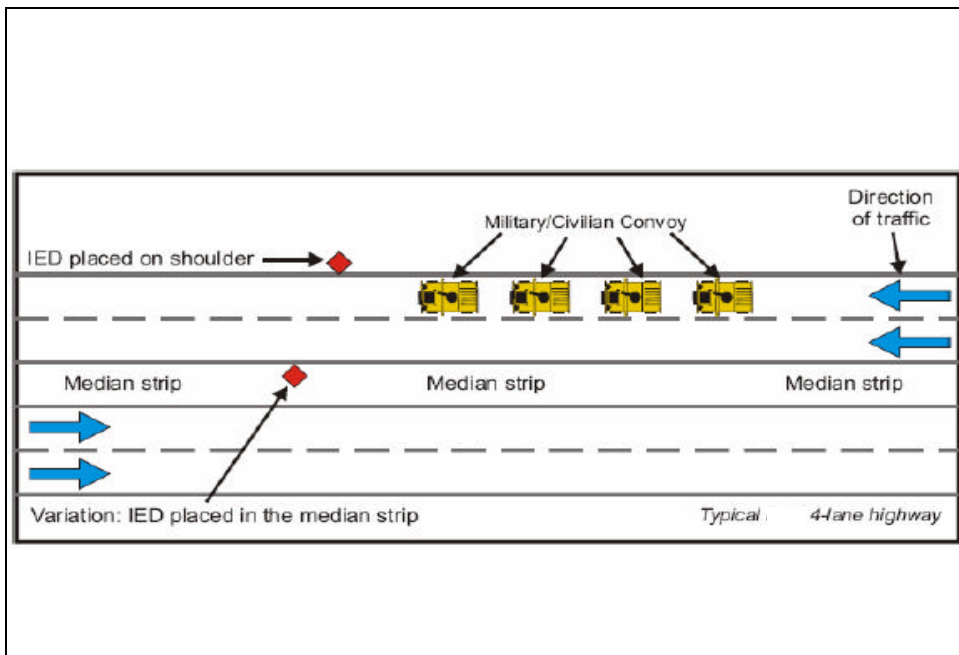


Figure 5-10: IED Placed on Shoulder of Road and Median Strip

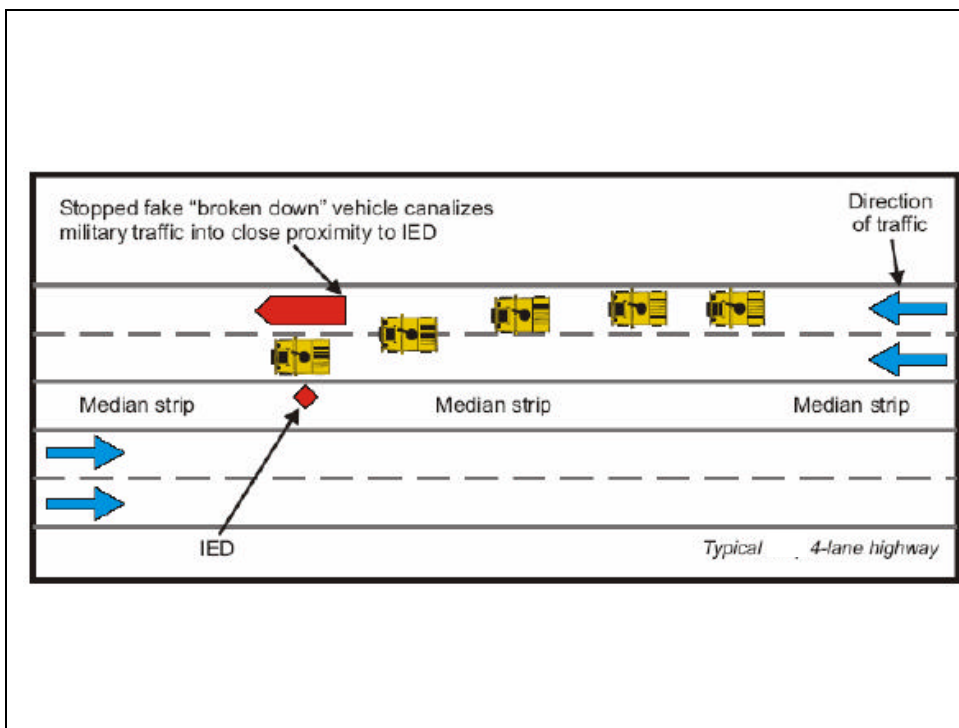


Figure 5-11: Canalizing the Convoy into the IED

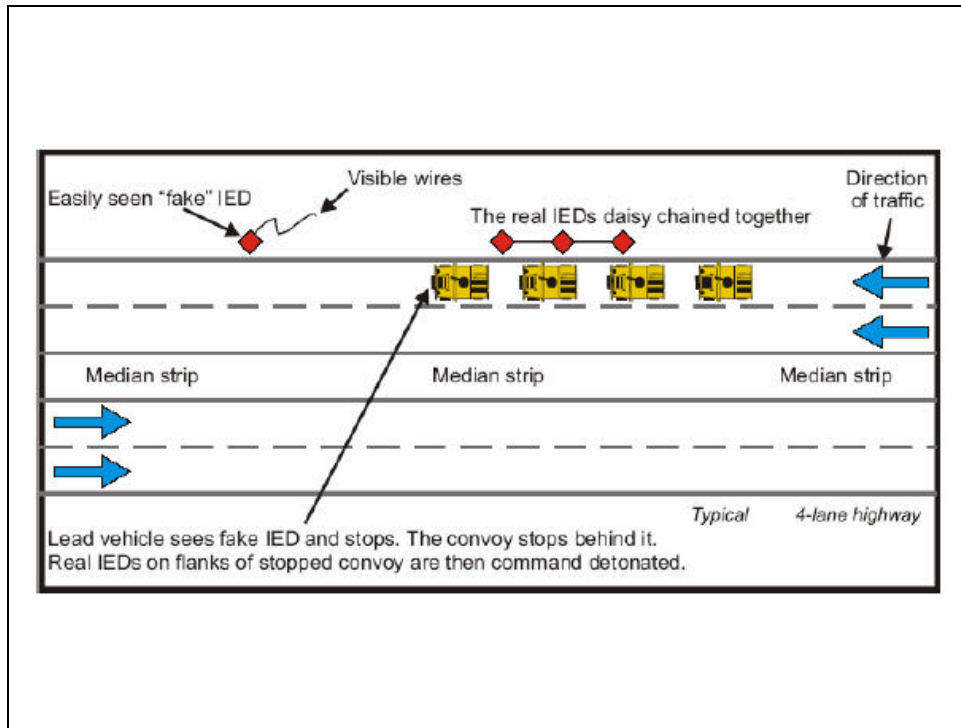


Figure 5-12: Fake, Visible IED used in Concert with Daisy Chain IEDs

- (1) Upon identification of an IED, the convoy should back off the IED at least 300 meters (time/distance permitting). Vehicles in the kill zone are to get out of the kill zone.
- (2) Security should cordon off the area with 360-degree security.
- (3) Disabled or damaged vehicles pushed or towed out of kill zone.
- (4) Conduct 5 and 25-meter drill for secondary devices in and around the area.
- (5) Scan/observe outlying areas for the remote triggerman and/or devices.
- (6) Report the situation to higher providing a SALUTE report.
- (7) Request EOD support utilizing EOD/UXO 9-line briefing format.

(8) If required, establish a vehicle control point (VCP) with enough standoff to ensure traffic remains clear of the IED site and VBIEDS cannot effectively engage the convoy.

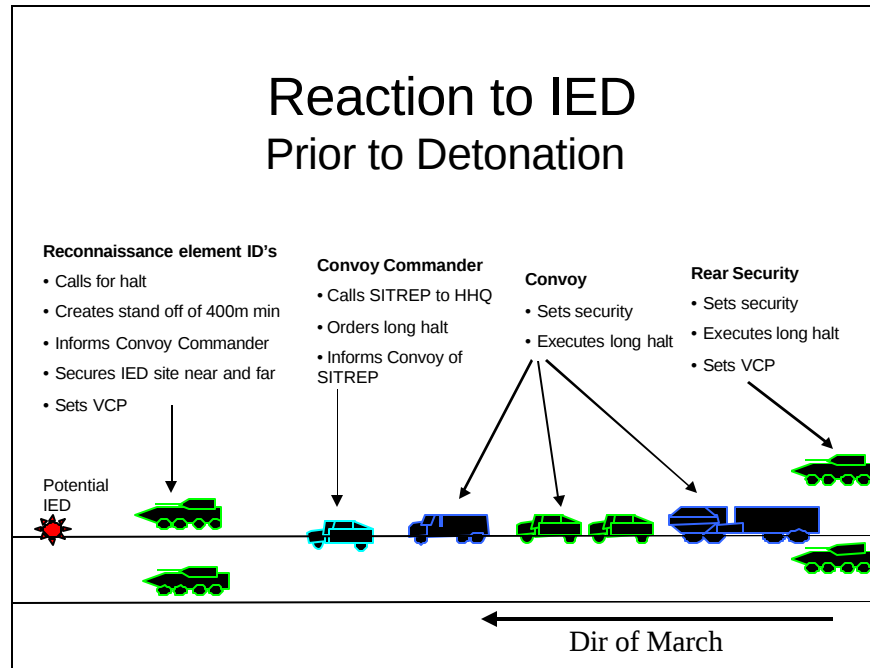


Figure 5-13: Reaction to IED Prior to Detonation

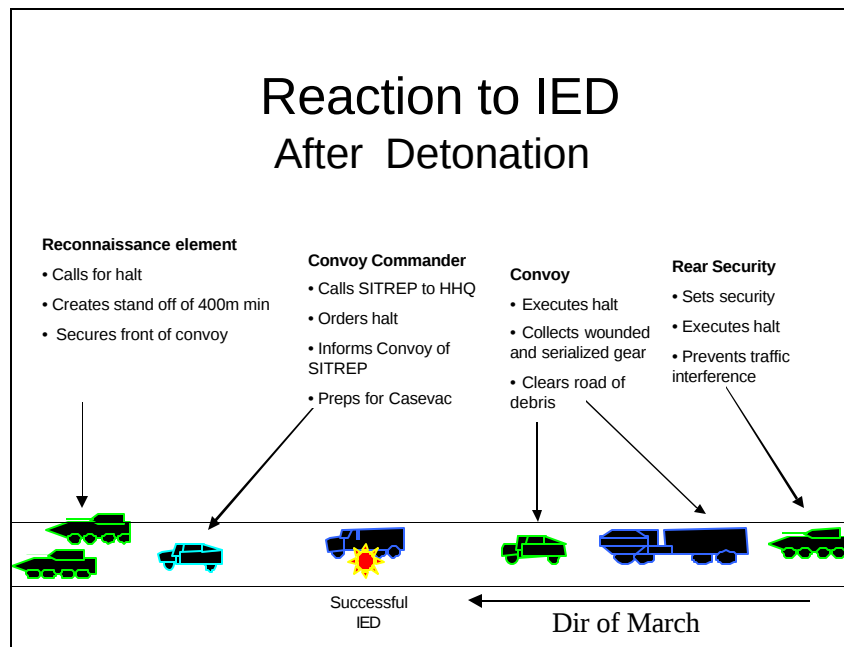


Figure 5-14; React to an IED After Detonation

--CONFIM, CLEAR, CALL, CORDON, CONTROL--

e. 5 and 25 Meter Checks. Any convoy halting more than 5 minutes must consider itself vulnerable to attack. Halts must involve individual Marines conducting 5-meter checks and teams conducting 25-meter checks.

(1) 5-Meter Checks. Identify a position to halt. Carry out a visual check using binoculars or other optics. Check for disturbed earth and suspicious objects, loose bricks in walls and security ties on streetlights. Work from the ground and continue up above head height. Conduct a physical check for a radius of 5 meters around your position. Be systematic and take your time. Use a white flashlight at night.

(2) 25-Meter Checks. CC decides to occupy an area for more than 5 minutes. Once 5-meter checks are complete, continue scanning out to 25-meters and then move forward in teams for a radius of 25-meters around your position checking for potential IED indicators and anything out of the ordinary.

f. Vehicle Blow Through to Recover

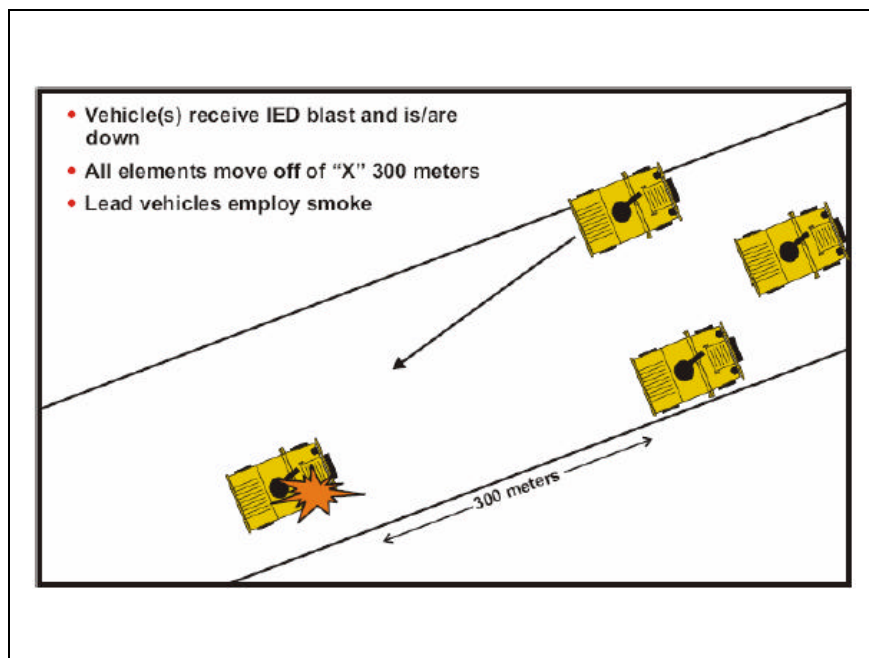


Figure 5-13: Step 1 Vehicle Blow Through to Recover Technique

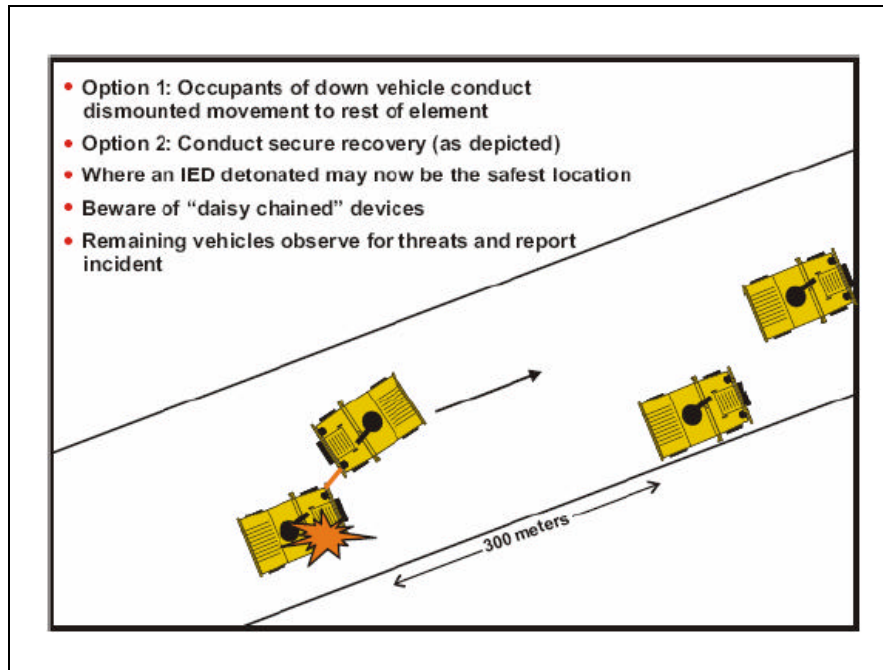


Figure 5-14: Step 2 Vehicle Blow Through to Recover Technique

g. Hasty Vehicle Recovery Technique

(1) Recovery Vehicle (R) approaches driver side of downed vehicle. This can be accomplished by either backing up or coming from the rear of the downed vehicle as depicted.

(2) Tow lines emplaced on front drivers side and right rear bumper side during vehicle preparation as depicted.

Gun-Truck Recovery Technique

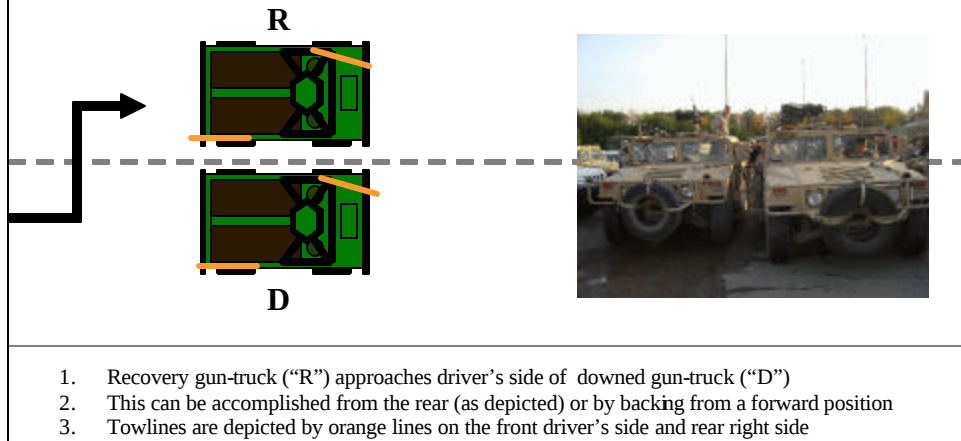


Figure 5-15: Moving Into Position for Hasty Recovery

(3) Passenger in near side position in vehicle (R) and driver of (D) ready strap hooks (black triangle) and maintain eye contact.

(4) Both positively engage strap hooks and observe tow strap to ensure it does not hang up on either vehicle.

(5) Driver of (D) ensures his vehicle is in neutral and prepares to brace the steering wheel.

(6) If need be the CC will exercise the rehearsed bump plan if vehicle can no longer carry passengers.

Gun-Truck Recovery Technique

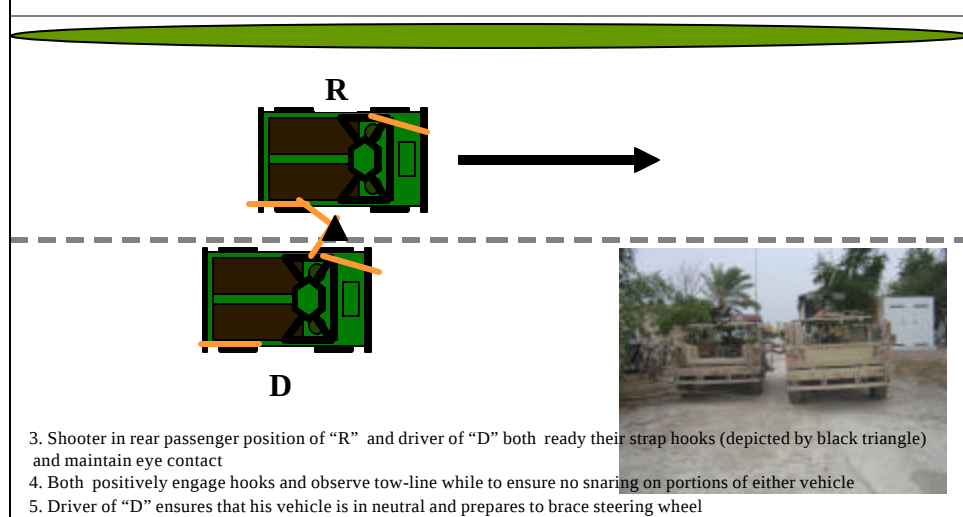


Figure 5-16: Hasty Recovery Hooked

Gun-Truck Recovery Technique

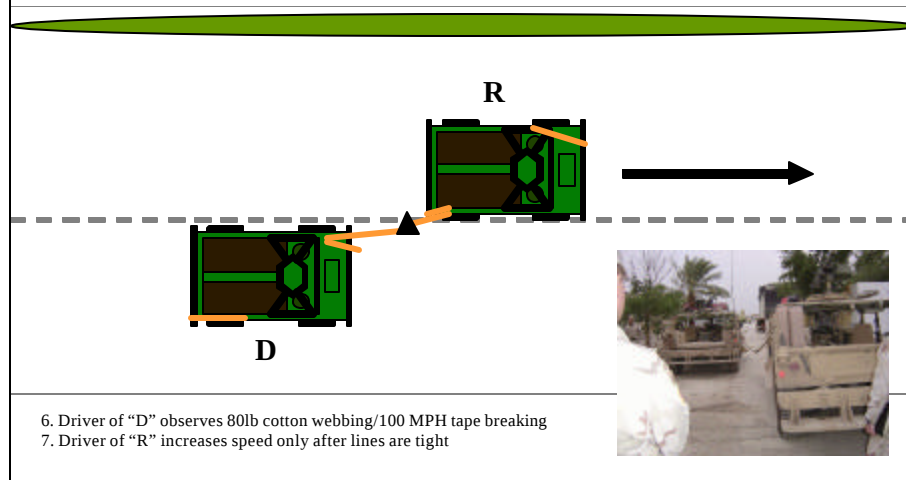


Figure 5-17: Hasty Recovery on the Tow

Gun-Truck Recovery Technique

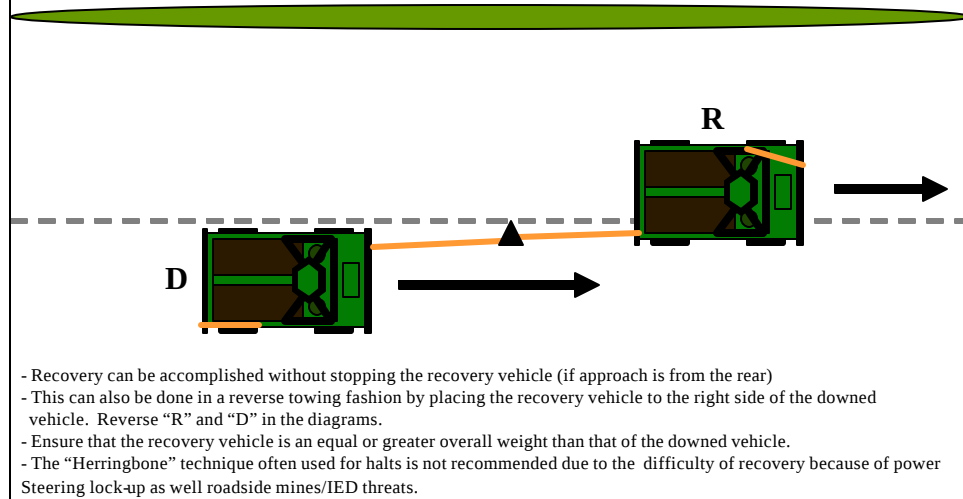


Photo 5-18: Hasty Recovery

g. Casualty Evacuation

(1) Aid and Litter Team position on the safe side of vehicle and extract casualties and personnel.

(2) Treatment of casualties, except emergency treatment to prevent loss of limb or life, will be performed outside the kill zone.

(3) QRF or designated security will secure the immediate area providing for 360-degree security.

(4) CLS/corpsmen will assess and triage as necessary and inform CC on the status of casualties making recommendation for ground or air CASEVAC.

(5) If the determination is made for air CASEVAC the CC or his designated representative (ACC) will request CASEVAC through the direct air support center (DASC) operating on the established TAR/HR net. SOPs will dictate the flow of the request. Requests will be conducted using the NATO 10-line format in Appendix J.

(6) Simultaneously, the ACC will employ an LZ control team to identify and prepare an LZ for the helicopter. Terminal guidance will be conducted over the appropriate air frequency utilizing the LZ Control Brief found in Appendix J.

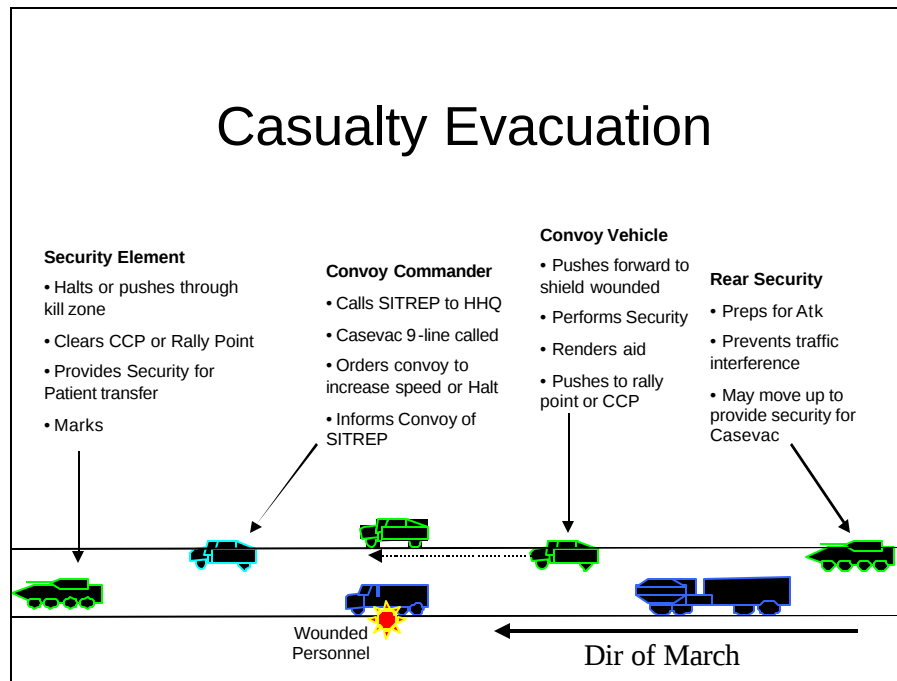


Figure 5-19: Casualty Evacuation

h. Snipers. Enemy snipers by themselves can do little harm to a convoy. If, however, the sniper can get the convoy to stop, a more dangerous situation can develop. When encountering a sniper:

(1) Do not stop unless directed otherwise by higher headquarters SOPs and mission tasks.

(2) If practical, throw smoke to screen enemy observation.

(3) Suppress with proportional fires in the sniper's general direction.

(4) Report immediately to higher headquarters the contact.

i. Air Attack. Units traveling in convoy are typically exposed and therefore vulnerable to air attack.

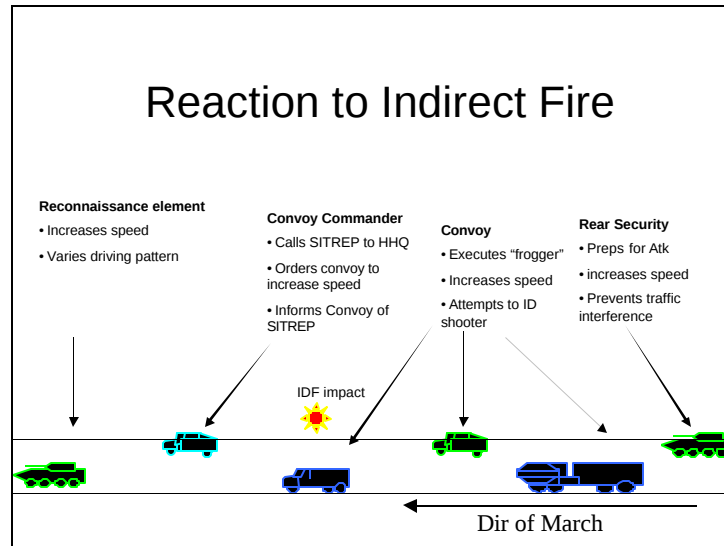
Combining small arms and machine guns with supporting low altitude air defense teams can provide a convoying unit with close in air defense. Enemy aircraft normally attack convoy columns linearly, either directly from the front or rear of the column. When possible, movement should be conducted at night or during inclement weather, using a closed column formation to reduce the convoys chance of acquisition by aircraft. Air sentries should be used to maintain a vigilant lookout to alert the convoy in the event of air attack. Air defense teams should be located within 3000 meters of each other to provide overlapping fires. When the convoy is attacked, the convoy should assume a staggered herringbone formation that provides for dispersion between vehicles, cover and concealment. Convoy personnel should engage the enemy aircraft per theater ROE and the recommendations in Figure 5-19. The key to effective small-arms fire against air targets is the volume of fire and then the accuracy of that fire. The massed fires of all available small arms, machine guns, and missile teams are placed on the attacking aircraft to destroy it, drive it away, or cause its ordnance delivery to be ineffective.

Aircraft	Course	Aim Point
Jet	Crossing	Two football fields in front of nose
Jet	Overhead	Two football fields in front of nose
Jet	Directly at you	Slightly above aircraft nose
Helicopter	Crossing	One-half football field in front of nose
Helicopter	Hovering	Slightly above helicopter body
Helicopter	Directly at you	Slightly above helicopter body

Figure 5-19: Engaging Enemy Aircraft

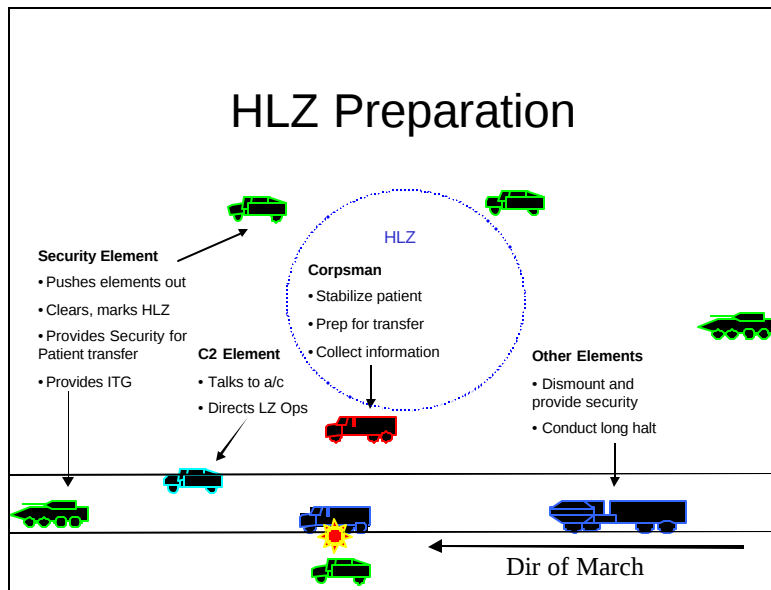
j. React to Indirect Fire (IDF). IDF is a common enemy tactic, although usually very inaccurate. The

institution of the “staggered (frogger)” movement technique is one way to attempt avoiding IDF impacts.

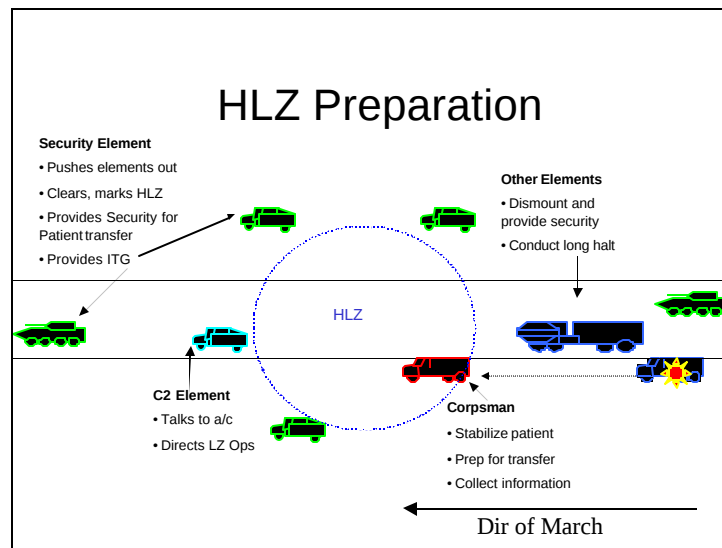


(1) Upon IDF contact the convoy immediately increases speed (designated in convoy brief). If the convoy is not currently utilizing the “staggered (frogger)” technique it should do so at this point. Once through the kill zone each element collects a SITREP and reports to the convoy commander. If impacts occur and force the convoy to stop, the tactics listed under “Reaction to IED After Detonation” apply, while recovery of personnel and equipment occur.

k. Landing Zone Preparation. Below are two examples of how units may secure Helicopter Landing Zones (HLZs), accounting for size considerations for the type of CASEVAC aircraft. Security for the landing site is paramount. Considerations of Initial Terminal Guidance (ITG), marking of the zone, security, marking of obstacles, and method of patient transfer are all METT-T dependent, but must be addressed. There are two current methods for securing an HLZ.



(1) The first example depicts the unit creating an HLZ directly beside the convoy ("point of injury" CASEVAC). It pushes out a Security Element that is responsible for HLZ marking, preparation, clearance, and ITG. The unit ambulance moves the patient out to the HLZ under the protection of the Security Element. This technique is used when obstacles preclude using the hard surface road as an HLZ. Brown out considerations (from helicopter rotor wash) must be addressed when choosing an HLZ.



(2) A common technique is to use the hard surface road as an HLZ. Creating a gap in the convoy,

sufficient in size for HLZ operations, can accomplish this. Other procedures are the same as the first example.

1. Reorganize After an Attack. It is important to have a rehearsed plan for reorganization of the convoy after an attack, due to the confusion and friction created by enemy action. Considerations include:

(1) Move the Convoy out of the Kill Zone. Rally points and "floating" rally points can be used to guide units to a safe location for consolidation and reorganization. Unless the route is blocked, the convoy should move to the nearest rally point on the far side of the ambush site. The convoy may be split into two elements at an IED strike, and may be required to consolidate at two different rally points.

(2) Re-establish Command and Control. The convoy commander must regain command and control of the convoy to ensure defensive measures and accountability procedures are accomplished. Every Marine in the convoy must be prepared to take charge of smaller dispersed elements of the convoy.

(3) Clear Danger Area of Casualties, EPWs and Equipment. Every effort should be made to get all friendly personnel from the kill zone. The convoy commander must establish accountability of personnel, determine status of casualties and equipment losses, and consolidate for continuing the mission. Some equipment may be unable to move. Destruction criteria for immobilized vehicles must be planned for. EPWs are highly unlikely in the kill zone, but there may be injured noncombatants in the area, requiring medical assistance. Casualty evacuation operations should be initiated as soon as possible and can run concurrent to other operations provided the area is secure.

(4) Solidify Defensive Positions. - Establish perimeter security (including a possible landing zone). Leaders should emplace automatic weapons to cover likely avenues of approach and possible enemy positions. Every Marine must be assigned a sector of fire and placed in a position utilizing available cover.

(5) Assess and Report Convoy Status. After gathering as much information as possible (personnel

accountability, damage to vehicles/personnel, ammunition status, communications status), the convoy commander must assess his ability to continue with the mission or return to base. Upon completion of this assessment, report status to higher headquarters using established reporting procedures.

m. Rolling Stops. In the same vein as the 5/25m checks in the rolling stop: when units plan to stop they slow their speed down for the last few hundred meters and use binoculars and other optics to look closely at the specific location they will stop. This is done in order to identify possible IEDs and avoid stopping adjacent to likely and suspected IEDs.

n. Honesty traces. Another lesson from the British in Northern Ireland is the "honesty trace". Although the concept may not seem applicable at the theater logistics levels -- where there may only be a few MSRs and only a limited ability to vary routes -- at the tactical level there can be myriad resupply routes to a company firm base. The "honesty trace" is the unit's responsibility to track their supply routes (to include patrol routes for rifle companies and battalions) to determine if you are establishing patterns--very similar to a "red cell". The key to success is not just using the planned overlays that are turned in to the COC prior to departure, but having the units modify their actual route upon return, which a majority of the time are altered due to unexpected friction or events on the planned route.

Appendix A

Convoy Warning Order Format

1. SITUATION: *General overview of enemy and friendly situation in the area of operation (AO). Friendly units are those that might provide direct support to the convoy along its route.*

2. MISSION: *The mission statement is a clear, concise statement of the mission to be achieved. The mission statement will state WHO, WHAT (the task), WHEN (SP time), WHERE (usually a designation with a route(s)), and WHY (the purpose).*

3. TASK ORGANIZATION: *This is a critical component of a good WARNO. It is the initial convoy manifest (see Appendix B for considerations for convoy organization and order of movement and manifest format).*

4. Initial Time Schedule: *Explanation and Format following the Convoy Warning Order Format.*

5. Special Instructions: *Guidance concerning PCIs, rehearsals and / or additional tasks to be accomplished.*

6. Service & Support: *Much of this information should be determined by a unit's standard operating procedures (SOPs). This section can be used for changes or additional information.*

Class I: (Rations & Water)

Class III: (*POL*)

Class V: (*Ammunition / Pyrotechnics*)

Weapon System Rounds Type
Pyrotechnic Device Number Location

Class VIII: (*Medical / CLS / Supplies*)

7. Uniform and equipment common to all:

Appendix B

Convoy Manifest

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Appendix C

Convoy Time Schedule

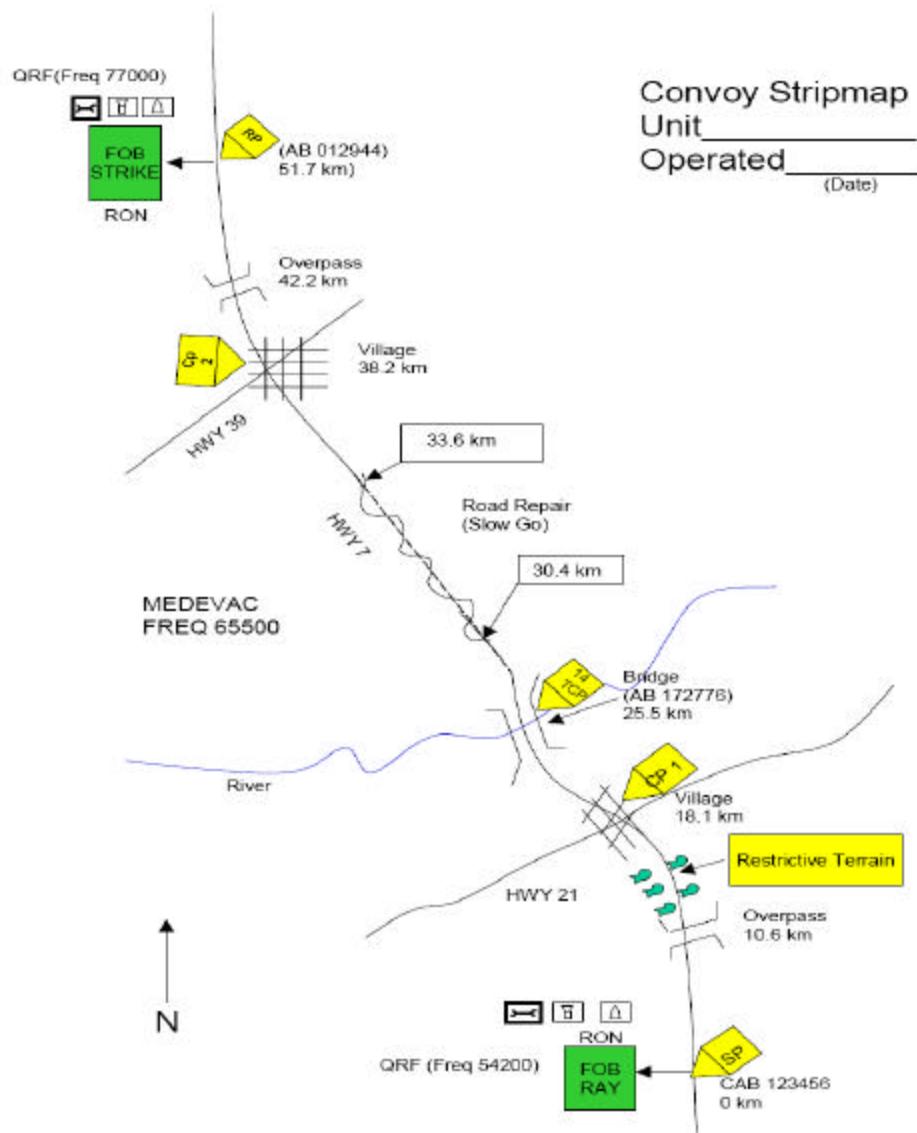
A realistic schedule that uses all of the time available from publishing of the WARNO to SP time is key to proper convoy planning and preparation. All preparatory tasks are listed with the responsible individual(s) assigned. It begins with Pre-Combat Checks (PCCs) and individual / vehicle rehearsals supervised by subordinate convoy leaders. The convoy brief is to be completed leaving a minimum 2/3 of the preparation time remaining to subordinates (one third - two thirds rule). Pre-Combat Inspections (PCIs) are scheduled to insure that all individuals, vehicles, weapons and communications are inspected by the convoy chain of command. Logistic preparations are scheduled around these essential tasks.

Time Schedule			
When	What	Where	Who

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Appendix D Strip Map

A strip map is a valuable tool for all personnel in a convoy. It provides an easily used navigational aid, route control and battle tracking information (Note: use of grid coordinates and kilometers between locations), operational and logistical support points, major terrain features, key built up areas, highway infrastructure, danger areas and enemy "hot spots". Although a strip map maybe generated at a higher command level, companies should improve these products with information obtained locally to maximize their utility. Strip maps should be continuously updated based on reconnaissance and debriefing of unit convoys. This is particularly important for depicting current enemy intelligence along the route. It is a company level responsibility to reproduce these strip maps and insure that one is issued to each vehicle in a convoy.



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Appendix E Convoy SmartPack

CONVOY #	CONVOY CDR	ACC
MISSION:		TIME PERIOD
		CHALLENGE
		PASSWORD

COMMAND & CONTROL					
WHO	CALL SIGN	FREQ.	VEHICLE/ LOCATION	NAME/UNIT	
CONVOY CDR					
ACC					
SFC					
LVC					
TMCC					
UMCC					
QRF 1					
QRF 2					
QRF 3					
CASEVAC					
COF					
SPARE					
SPARE					

KEY TIMES AND LOCATIONS						
WHAT	WHERE	WHEN	WEAPON STATUS	MOPP STATUS	ADA STATUS	REMARKS
STAGE						
PCI						
REHEARSALS						
MOVEMENT ORDER						
START POINT (SP)						
LINK-UP POINT						
RELEASE POINT (RP)						

KEY POINTS				
CP/CR #	LOCATION	DISTANCE	ROAD CONDITION	ENEMY SITUATION

BREVITY CODES

CODE	EVENT	TIME	REMARKS
	DEPART AA		
	ARRIVE SP		
	ARRIVE CP 1		
	ARRIVE RP		
	MISSION COMPLETE		
	CONTACT/AMBUSH		
	CONVOY ENGAGED WITH ENEMY		
	IED		
	VEHICLE DOWN MAINTENANCE		
	OBSTACLE		
	SNIPER		

STRIP MAP

ROE

ORDER OF MARCH

VEHICLE #	CALLSIGN	VEHICLE CDR	WPN SYSTEM	CARGO/PERS.	ASSETS

LOGISTICS

AMMO	QTY/WPN	
5.56MM (RIFLE)		WATER
5.56MM (SAW)		
7.62 (MACHINE GUN)		CHOW
.50 CAL		
40MM (203)		MEDICAL
40MM (MK19)		
AT-4		MAINTENANCE
DEMO		HALTS/RON

Appendix F Convoy Brief

Movement Order No. _____

References: A. _____ (Maps, tables and relevant documents)

B. _____

TASK ORGANIZATION: (Internal organization for convoy - Manifest)

1. SITUATION:

a. Enemy Forces:

- (1) Weather. General forecast.
- (2) Light data (EECT, % Illumination, MR, MS, BMCT)
- (3) Discuss enemy.
 - (a) Identification of enemy (If known).
 - (b) Composition / capabilities / strength / equipment
 - (c) Location (Hot spots highlighted on map)

b. Friendly Forces:

- (1) Operational support provided by higher headquarters.
 - (a) Helicopter / gunships
 - (b) Quick Reaction Forces (QRFs)
 - (c) MP Escorts / Rat Patrols
 - (d) Fire support elements / Element Location Frequency / Call Sign

c. **Attachments:** (Elements assigned to the convoy from outside the organization)

2. MISSION: (WHO, WHAT, WHEN, WHERE, & WHY)

3. EXECUTION:

a. **Concept of Movement:** This paragraph describes, in general terms, the big picture from start to finish.

b. **Tasks to subordinate units** (Manifest): Includes attached or OPCON elements.

d. **Coordinating Instructions:** (Instructions for ALL units)

- (1) Order of March (Spacing of serials / location of support elements).
- (2) Routes. (Strip map displayed separately, includes SP, load points, checkpoints, rally points, refuel points, mandatory halts, RONS, traffic control points. Mileage to each should be indicated.)
- (3) Additional movement issues. (Speed, intervals, lane, parking, accidents, ect.)
- (4) Uniform

- (5) Actions at danger / hazard areas (SOPs or battle drills to be rehearsed)
- (6) Rules of Engagement

4. SERVICE SUPPORT: This paragraph provides the critical logistical information required to sustain the convoy during the operation. Also included are combat service support instructions and arrangements that support the operation.

- a. Ration / Water Plan:**
- b. Ammunition** (Individual / Combat Loads / Tracer Mix)
- c. Medical** (Internal treatment / evacuation procedures other than SOP and external procedures / support)
- d. Petroleum, Oil and Lubricants** (Internal and external)
- d. Maintenance / Recovery** (Internal and external)
- e. Remain Over Night (RON) Facilities:**

5. COMMAND AND SIGNAL: This paragraph states where command and control nodes and key leader will be located during the operation.

- a. Commander(s) / Positioning** (Manifest):
- b. Communications** (Call Signs (external traffic) & Frequencies):
- c. Signals:** (Primary / Alternate other than SOP, standard visual (Hand & Arm) signals are illustrated in Appendix G)
- d. Reports** (Internal and to Higher):

6. SAFETY / RISK MANAGEMENT (*Emphasize key risks / control measures*)

7. REVIEW TIMELINE (*Displayed separately*)

8. GIVE TIME HACK

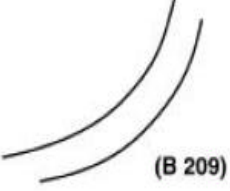
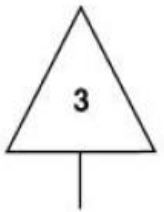
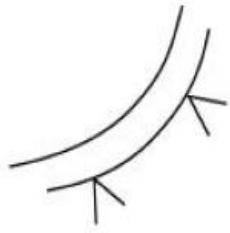
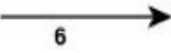
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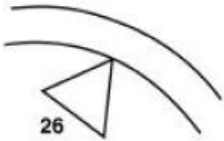
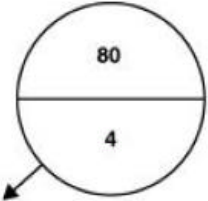
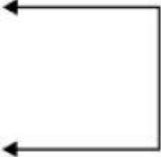
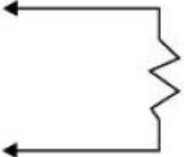
10. KEY LEADER CONFIRMATION OR BACKBRIEFS

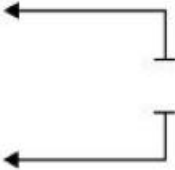
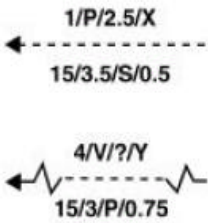
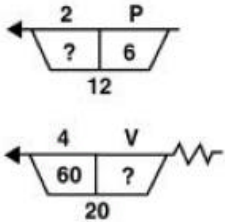
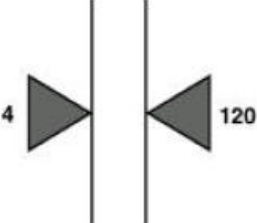
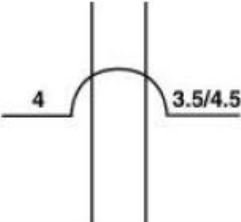
11. FRAGOs FOR LONG HAUL ROUTES (It is not feasible to cover in detail all of the information required to support long haul convoys that involve hundreds of kilometers and RON halts in a single convoy brief. Therefore, it is essential that each leg of an extended convoy be preceded by a FRAGO that would include, as a minimum, a separate strip map, specific intelligence for that portion of the route and updated information concerning the support units such as MPs or QRF locations / communications).

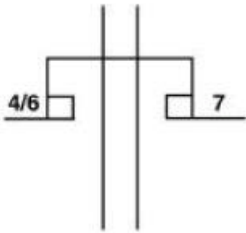
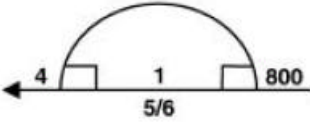
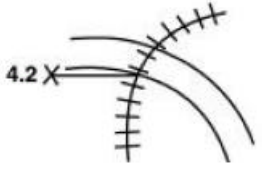
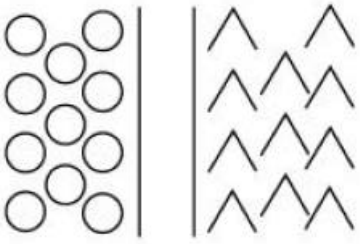
Appendix G

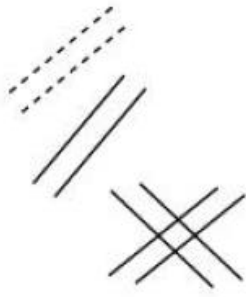
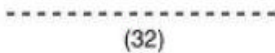
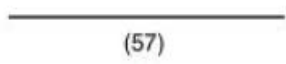
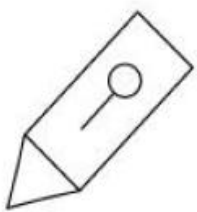
Convoy Tactical Symbols

Explanation	Symbol	Remarks/Reference
Civil or military route design		Designation written in parentheses along route.
Critical point		Critical points are numbered and described in legend. They may be used to point out features not adequately covered by other reconnaissance symbols.
Limits of sector		Limits of reconnoitered sector or route.
Grades	 5-7%  7-10%  10-14%  Over 14%	Arrows point uphill; actual percentage of slope is shown to the right of the symbol. Length of arrow represents length of grade if map scale permits.

Explanation	Symbol	Remarks/Reference
Sharp curve		Vertex of triangle points to map location of curve; number indicates radius.
Series of sharp curves		Left figure indicates number of curves. Right figure indicates radius of the sharpest curve.
Full bridge symbol		Arrow extends to bridge location on map. Minimum width is placed below, overhead clearance to the left, and overall length to the right of the basic symbol. Lower portion of the symbol indicates bridge serial number; upper portion, military load classification. Underlined values are those below minimum standards.
Abbreviated bridge symbol		Arrow extends to location on map. Lower portion of symbol indicates bridge serial number; upper portion, military load classification. Class number must be underlined if width or overhead clearance is below minimum standards.
Bypass easy		Used in conjunction with bridge and reconnaissance symbols.
Bypass difficult		Used in conjunction with bridge and reconnaissance symbols.

Explanation	Symbol	Remarks/Reference
Bypass impossible		Used in conjunction with bridge and reconnaissance symbols.
Ford		Arrow extends to ford location on map. Data above line indicates, in order: serial number, ford type, stress velocity per second, and seasonal limitations. Data below line indicates, in order: length, width, bottom type, and depth. Question marks indicate unknown information. Difficult approaches are represented by zig-zag lines and correspond to shore position of approach. Ford type: Bottom type: V-vehicular M-Mud P-pedestrian C-Clay S-Sand G-Gravel R-Rock P-Artificial paving Seasonal limiting factors: X-None Y-Significant
Ferry		Arrow extends to ferry location on map. Data above indicates ferry serial number and type. Data inside symbol indicates military load class of deck and dead weight capacity in tons. Data below symbol is turn-around time in minutes. Question mark indicates unknown information. Difficult approaches are represented by zig-zag lines corresponding in position to shore approach. Ferry type: V-Vehicular P- Pedestrian
Width construction		Figure to the left indicates the width of the route constriction; figure to the right, the total constricted length.
Arch underpass constriction		Figure to the left indicates width of constriction; figure to the right, overhead clearance. If different, both minimum and maximum clearances are given.

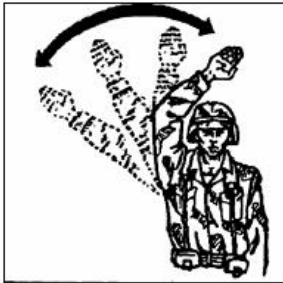
Explanation	Symbol	Remarks/Reference
Rectangular underpass constriction with sidewalks		Number indicates width of traveled way followed by total width, including sidewalk to left of symbol. Overhead clearance appears on right.
Tunnel with sidewalks		Arrow extends to tunnel location on map. Serial number is placed inside symbol; Width to the left, total length to the right; minimum/maximum overhead clearance is placed below.
Railroad grade crossing		Grade crossing is level; passing trains will interrupt traffic flow. Number indicates height of powerline above ground (if present).
Concealment		Road lined with trees, deciduous on left, evergreen on right.
Concealment		Woods bordering road, deciduous trees on left, evergreens on right.
Side road turnoff Additional information Wheeled vehicle Dead-end road over 1 km		Arrow indicates direction of turnoff. Number indicates length of turnoff.

Explanation	Symbol	Remarks/Reference
Roadblock, craters, and blown bridges Proposed Prepared but passable Completed		Center of symbol indicates position of block.
Lateral route		Broken lines indicate lateral route identified by even number.
Axial route		Solid line indicates axial route identified by odd number.
Unknown or doubtful information		
Parking area		
Traffic control point		

Appendix H

Convoy Hand and arm Signals

Hand and arm signals are an effective means of conveying orders and guidance to a convoy in an operating environment. Use of hand and arm signals requires rehearsal by all members of the organization so that they clearly understand the message when it is most important.



mount



dismount



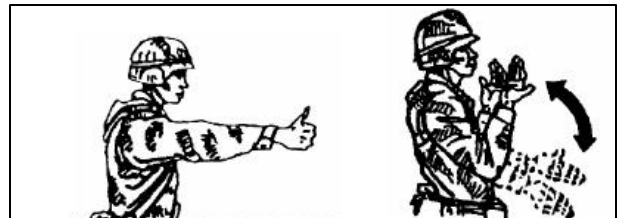
Join/follow me



assemble



move forward (casevac)



Move forward (recovery)

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Appendix I

Convoy and Aviation Integration SmartPack

The product contained within this appendix was developed by the MAWTS-1 GCD training branch and is intended to be used as a quick guide for basic report formats that convoy commanders and key billet holders will utilize while conducting convoys.

<u>CASEVAC REQUEST / MEDEVAC INFO</u> (FROM FAC TO DASC/DASC(A)/TACC(A) HIGHER)	
VHF (S/C/PT) (PRI) _____	(ALT) _____
UHF (PRI) _____	(ALT) _____
SAT PH _____	
<u>CASEVAC REQUEST/NATO 10-LINE</u>	
1. Pick up site: GRID Coordinates _____	
2. Pick up site: Freq and C/S _____	
3. Number of patients by precedence:	
# of A – Urgent (1 hour)	
# of B – Urgent Surgery (1hr)	
# of C – Priority (4-6 hrs)	
# of D – Routine	
# of E – Convenience	
4. Special equipment needed by Patients:	
A - None	C - Extractor equipment
B - Hoist	D - Ventilator
5. Number of patients by Type:	
# of L – Litter	
# of A – Ambulatory	
6. Security at Pick up site (tactical)	
N – No enemy	
P – possible enemy troops	
E – Enemy troops (caution recommended)	
X – Enemy troops (armed escort recommended)	
7. Marking at P/U site: Day/Night	
A – Panels (color)	
B – Pyrotechnics (color)	
C – Smoke (color)	
D – None	
E – Other	
8. Patient Nationality and Status:	
A – US Military	
B – US Civilian	
C – Non US Military	
D – Non US Citizen	
E – EPW	
9. NBC Contamination: N – Nuclear B – Bio	
C – Chem D – None	
10. Patient information: First Initial, Middle Initial, Last Name, Last 4	
SSN, Unit	

CONVOY AIR ESCORT BRIEF

1. Mission Overview/Objective (Convoy Number)
2. Enemy:
 - a. SALUTE
 - b. Expected enemy contact – when/where/type
 - c. MPCOA, MDCOA
3. Friendly
 - a. Situation
 - b. Adjacent: convoy, patrols, units route crosses
 - c. Frequency, Callsign, marking
4. Convoy Composition
 - a. # and type of vehicles
 - b. Dispersion
 - c. Friendly vehicle marking Day/Night
 - d. Convoy Formation/Order of March
 - e. Convoy Commander Location
 - f. Assistant Convoy Commander location
 - g. Security assets
 - h. Fire Support Assets
 - (1) Crew served
 - (2) Type/location
 - (3) IDF assets
5. Convoy Primary/Alternate Route
 - a. Checkpoints
 - (1) CP
 - (2) GRID
 - (3) Terrain Features
 - (4) Planned halt points
 - b. Rate of advance
 - c. Start time/Time enroute/Expected end time
 - d. Danger areas
 - (1) Route color code
6. Aviation Assets
 - a. # and type of aircraft available
 - b. Ordnance load
 - c. Location of controller in convoy/marking
 - d. Preplanned LZs
 - e. FSCMs
 - f. Type escort attached/detached
 - g. RW attack geometry
 - h. Terminal control procedures
 - (1) 6-line
 - (2) 12 o'clock is "____"
 - (3) Marking capabilities (tracer,IRP)
 - (4) Location of closest friendlies
 - (5) CASEVAC request

CASUALTY ASSESSMENT

SECURE AREA ENSURE AREA IS SAFE, NO ENEMY. POST LZ SECURITY WITHIN CAPABILITIES AND FREE OF IEDs

DIRECT THE CASEVAC TO BE CALLED

CASUALTY ASSESMENT

LIFE-THREATENING BLEEDING

- Apply pressure dressing.
- If unable to stop bleeding use tourniquet in IFAK, cravat or belt to stop bleeding in a limb.
- Recheck tourniquet to ensure bleeding has stopped.
- Look for additional bleeding, and bandage.

BREATHING

- If no air movement
 - Head-tilt chin lift or
 - Safety pin through tongue and lower lip
- Assess respirations, if having labored breathing, check for chest injury and cover wound with Vaseline gauze/bandage.

Treat for shock

- Lay flat on back and elevate feet or in recovery position on side. If trained, and in shock start 18 gauge IV and give IV fluids
- Check for additional wounds.
- Splint fractures and monitor pulse

Reassure the injured Marine, keep them warm and package for CASEVAC

“PILOT SPEAK”

OTHER BREVITY CODES

ARIZONA—No ARM ordnance remaining.

BINGO—Fuel state needed for recovery.

CHATTERMARK—Directive call to begin using briefed radio procedures to counter jamming.

CONTINUE—Proceed on current parameters.

CONTINUE DRY—Ordnance release not authorized

HOLD FIRE—An emergency fire control order to stop firing on a designated target, to include destruction of missiles in flight.

HOSTILE—A contact identified as enemy upon which clearance to fire is authorized in accordance with theater rules of engagement.

JOKER—Fuel state above BINGO at which separation/event termination should begin.

MAGNUM (system/location)—Launch of friendly antiradiation missile.

OFFSET (direction)—Directive/informative call indicating maneuver in a specified direction with reference to a target.

PIG(S)—Friendly glide weapon(s) (i.e., JSOW).

PLAYTIME—Amount of time aircraft can remain on station.

RIFLE—Friendly air-to-surface missile launch.

SPLASH—1. (A/S) Weapons impact. 2. (S/S) Informative call to observer or spotter five seconds prior to estimated time of impact.

SUNSHINE—Directive or informative call indicating illumination of target is being conducted with artificial illumination.

THUNDER—Informative call one minute prior to A/S weapons impact.

WINCHESTER—No ordnance remaining.

- (a) Escort req
- (b) Convoy req
- I. TRAP procedures

7. Communications

- a. Primary control frequency
- b. Alternate control frequency
- c. Convoy control freq
- d. Alternate convoy control freq
- e. Freq of units traveling through
- f. IDF freq
- g. TATC for DASC
- h. Secure/Unsecure

8. Contingencies

- a. Convoy actions on contact
 - (1) Blocked ambush
 - (2) Unblocked ambush
 - (3) IED/VBIED/RCIED/VCIED attack
- b. No Comm signal plan (air to grnd, grnd to air)
 - (1) Fires
 - (a) Target mark/engage
 - (b) Cease fire
 - (2) Directive comm
 - (3) Descriptive comm
- c. Convoy Rally plan
- d. Disabled vehicle /recovery plan
- e. Missing Marine Plan

9. Night Considerations

- a. Reduced dispersion
- b. Lighting
 - (1) All lights on
 - (2) 1*, last, Convoy CDR w/hazards
 - (3) IR lighting capability

10. Escort aircraft should provide the following:

- a. Vehicles/construction on route
- b. Local populous activity
- c. Suspicious items, vehicles or activity along route
- d. City traffic
- e. CP reconnaissance
- f. Last vehicle clear of CP/Danger area etc...

Highlighted Items are for over the radio brief

CONVOY COMMUNICATIONS

It is imperative that the convoy commander understand and be intimately familiar with the communications architecture of the ACE and knowledge of the ATO for that day. For this, liaison with the unit Air Officer is critical. Each time a convoy rolls they should have wargamed a "worse case" scenario for requesting aviation assistance in an extremis situation. Ground units do not possess a high degree of UHF communications assets. Adjust accordingly. Consider and plan for use of all forms of comm from hand/arm signals and horn blasts to BLUFOR Tracker and Sat phones. Convoy leaders must ensure they have all frequencies of friendly units in which they will pass through and are knowledgeable of aircraft operations, locations and times along their route. The lives of your Marines may depend on it.

COMMUNICATIONS (Assuming no comm with A/C in flight)

#1. OPTION USE OF AN IRIDIUM PHONE

- **Iridium Phone to Iridium Phone** Enter 00 and 12 digit Iridium phone number desired. Press OK.
- **Iridium Phone to Thuraya Phone** Enter 00-698 and 13 digit Thuraya phone number desired. Press OK.
- **Iridium Phone to DSN Phone** Enter 00-696 and (DSN area code 312 CONUS or 318 SWA) XXXX-XXX. Press OK

IRIDIUM PHONE NUMBERS

DASC	IRIDIUM:	00-	-	-	-
	Tactical Ph.#:	00-	-	-	-
Div SWO	IRIDIUM:	00-	-	-	-
	Tactical Ph #:	00-	-	-	-
IMEF COC	IRIDIUM	00-	-	-	-
	Tactical Ph #:	00-	-	-	-
TACC SWO	IRIDIUM:	00-	-	-	-
	Tactical Ph #:	00-	-	-	-

#2. OPTION THURAYA PHONE

- **Thuraya Phone to Thuraya Phone** Enter the 13 digit Thuraya cell phone number you desire and then "Press" Call.
- **Thuraya Phone to Iridium Phone** Press and hold down the 0 key until the + sign appears. Enter the 12 digit Iridium number desired from those listed above and then "Press" Call.

THURAYA PHONE NUMBERS

DASC	8821-	-	-	-
Div SWO	8821-	-	-	-
IMEF COC	8821-	-	-	-
TACC SWO	8821-	-	-	-

"PILOT SPEAK"

MARKING BREVITY CODES

BLIND—No visual contact with friendly aircraft/ground position. Opposite of VISUAL.

CONTACT—1. Acknowledges sighting of a specified reference point. 2. Sensor contact at the stated position.

CAPTURED—Aircraft has acquired and is able to track a specified air -to-ground (A/G) target with an onboard sensor.

NO JOY—Aircraft does not have visual contact with the target/bandit/landmark. Opposite of TALLY.

TALLY—Sighting of a target or enemy position. Opposite of NO JOY.

VISUAL—Sighting of a friendly aircraft or ground position. Opposite of BLIND.

LASER BREVITY CODES

DEADEYE—Informative call by an airborne laser designator indicating the laser/IR system is inoperative.

LASER ON—Directive call to start Laser designation.

LASING—Informative call indicating that the speaker is firing the Laser.

NEGATIVE LASER—Aircraft has not acquired Laser energy.

SHIFT (direction)—Directive call to shift Laser illumination.

SPOT—Acquisition of Laser designation.

TEN SECONDS—Directive to terminal controller to stand by for LASER ON call in approximately 10 seconds.

TERMINATE—Stop Laser illumination of a target.

NIGHT IR CAS BREVITY CODES

BURN—Informative call that Gated Laser Illuminator (GLINT) is being used to provide illumination. Typically employed by AC-130 to illuminate surface points of interest.

ROPE—Circling an IR pointer around an aircraft to help the aircraft identify the friendly ground position.

SPARKLE—1. Target marking by IR pointer. 2. Target marking by gunship/TAC-A using incendiary rounds.

SNAKE—Directive call to oscillate an IR pointer about a target.

STEADY—Directive call to stop oscillation of IR pointer.

STOP—Stop IR illumination of a target.

DETAILED LZ BRIEF

1. MISSION # _____
2. LZ LOC (GRID) _____
3. UNIT CALLSIGN _____
4. FREQ(S) _____
5. LZ MARK _____
6. WIND DIRECTION _____
7. ELEVATION / SIZE _____ / _____ / BY _____
8. OBSTACLES _____
9. FRIENDLY POS(S) (DIR / DIST) _____ / _____ / _____
10. ENEMY POS(S) DIR / DIST _____ / _____ / _____
11. LAST FIRE RECD (TIME/DIST) _____ / _____ / _____
12. DIR OF FIRE / DIST _____
13. CLEARANCE TO FIRE (DIR / DIST) _____ / _____ / _____
14. APPROACH / RETIREMENT (RECOMMENDED) _____
15. PERSONNEL / EQUIP _____
16. OTHER _____

AIRCRAFT SPECIFICS

AH-1W (Cobra) – Attack: 20mm gun (2,000m range), rkts and missiles
UH-1N (Huey) – Light Utility, transport 1 to 4 pax, offensive capability: 7.62" door guns and 2.75" rkts, .50 Cal MG
CH-46 (Sea Knight) – Medium Lift, transport up to 12 pax (waiverable to 24), most versatile assault support, self defense: dual .50 cal
CH-53E (Super Stallion) – Heavy Lift, transport 24 pax (waiverable to 34), large rotor wash, self defense: dual .50 cal, possibly a third (tailmounted) ramp gun.
UH-60 (Blackhawk) – MEDEVAC, transport 1 or 2 injured personnel, unarmed in accord with Geneva Conventions (may be escorted by armed A/C)

LZ SELECTION AND REQUIREMENTS

1. Selection: LZ should be generally level, slope not to exceed 8%, and free of debris. Aircraft will try to land into the wind, do not ground guide unless requested by pilot.
2. Preparation: (Recommended)
 - I. Day: Use **RED** smoke or VS17 panel held in hand. Do not stake in ground.
 - II. Night: Preferred method is a green chemlight attached to a 10-foot cord and swung overhead. Use of strobe lights and headlights are acceptable when no other means are available. Avoid shining white red light at the aircraft.
 - III. Never approach the helicopter unless directed by crewman.
 - IV. Remove unnecessary personnel, vehicles, equipment and obstacles from the vicinity of the LZ.

#3. OPTION TACTICAL AIR REQUEST NET & CS MND MEDEVAC NET

HF Frequency – _____ Uncovered USB Uncovered
(TAR/HAR-3) To contact the Division COC and Air Officer

VHF Frequency – _____ Uncovered as Alternate Frequency

#4 OPTION MILITARY POLICE FREQUENCY

(For MSR(s))

_____ VHF Single Channel Uncovered
Contact " _____ " MP Contact Points.

#5. OPTION OTHER TACTICAL NETS

DIVTAC 2 UHF TACSAT TBI Uplink and Downlink
LZ CONTROL VHF - _____ 0 Uncovered UHF - _____ 0
Convoy Control Battalion TAC NetID Covered
MEF Convoy Control VHF xx.xx0 Covered
CS MND Convoy HF Frequency- _____ 5 USB Uncovered
Emergency Net 0300z-1600z
Uncovered HF Frequency - _____ 0 USB
1600z-0300z

#6. OPTION BLUE FORCE TRACKER

Text Message to DIVMN-1DIV-MC

CLOSE AIR SUPPORT COMM

MEF CONVOY COMMON – Monitored by DASC(A) or J-STARS
3D MAW UHF Common Freq. _____
Other Coalition Aircraft _____
All Helo's Monitor UHF Freq _____ Uncovered
Other service agencies:

_____: _____
_____: _____
_____: _____
_____: _____
_____: _____
_____: _____

SITREP BRIEF TO AIRCRAFT

1. GENERAL ENEMY SITUATION
2. THREAT ACTIVITY
3. GENERAL FRIENDLY SITUATION
 - a. ADDITIONAL PLAYERS ON STATION
4. FRIENDLY ARTILLERY ACTIVITY
 - a. FSCM'S IN EFFECT
5. UPDATED/ADDITIONAL ACM'S
5. REMARKS
 - a. LOCALIZED SEAD EFFORTS (suppression/EW)
 - b. HAZARDS (WX/TERRAIN/OBSTRUCTIONS)
 - c. GPS TIME HACK
 - d. TYPE I/II/III CAS IN EFFECT (if applicable)
 - e. MAP DATUM

RAMROD

BASE#

0	1	2	3	4	5	6	7	8	9

**LZ OPERATIONS
Requirements**

A/C	Length x Width	Single/Section	Other Considerations
CH-53	200' x 300' / 300' x 400'		Large rotor wash
CH-46	100' x 100' / 200' x 200'		Capable of semi-rough terrain landing
UH-60	100' x 100' / 200' x 200'		Unarmed, flying ambulance
UH-1N	75' x 100' / 150' x 150'		Variety of missions/ordnance, degraded by hot temp
AH-1W	75' x 100' / 150' x 150'		Narrow skids require flat/smooth surface

LZ CHARACTERISTICS:

Loose sand/dirt degrades helo landing capability as well as hot temperatures. Minimum LZ size is facilitated by hard, paved/cement surface without vertical obstructions (trees, poles, wires). Larger LZ area required in unimproved/dusty terrain.

WEATHER EFFECTS:

Hot temperature may require shallow helo approach to LZ. Also limits lift ability and range. Many RW assets are limited to 3 NM visibility to takeoff or land. This can be further hampered by blowing dust and debris.

LZ / FRIENDLY MARKING:

Inform aircrew and mark LZ with panel, signal mirror in daytime, strobe, IR at night, chem lights, etc.

COMMUNICATIONS:

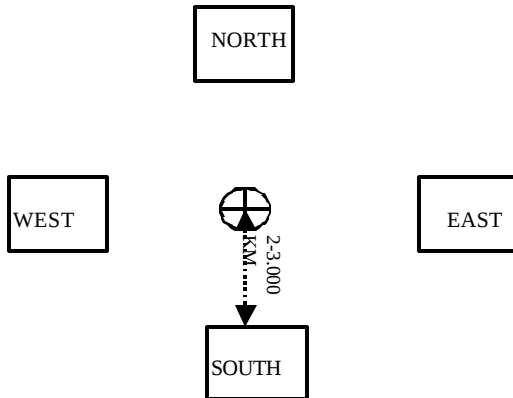
HF – Not normally available on any rotary wing aircraft
UHF – longer range, emergency contact air on 243.0 (Guard)
VHF – shorter range due to atmospheric. Still line of sight dependent.
Sat Phones – Iridium/ Thuraya- covered and uncovered capability

LANDING ZONE BRIEFS

BASIC LZ BRIEF (GIVEN TO INBOUND A/C)

Zone Location: _____
Marked by: _____
Obstacles: _____
Wind Direction: _____
Friendlies: _____
Enemy: _____
Remarks: _____

HASTY ACM'S



HASTY RW CAS

- Upon check in pass center grid of objective
- From center grid pass appropriate BP and holding area for coordination. BP's are standard 2X2 in open terrain.
- "Center grid TP 8746 9347, proceed BP South report established."
- Pass 9-line as appropriate
- * Oscar can be used as an overhead in a permissive environment

6 LINE CAS REQUEST

SEQUENCE

A. WARNING ORDER

B. BRIEF

C. END OF MISSION OR SHIFT

"_____ This is _____, Fire Mission, Over"

	MISSION 1	MISSION 2	MISSION 3	MISSION 4
1. LOCATION/ POS MARK*				
2. DIRECTION DEG MAG**				
3. DISTANCE METERS***				
4. TARGET DESCRIPTION				
5. MARK TYPE				
6. REMARKS				

* "My position marked by _____"

** Direction is said as "Three zero zero"

*** Distance is said as "Two thousand"

"End of Mission or Shift _____" Shift is from FACs position L/R, you must interpolate.

AC-130 CALL FOR FIRE

1. OBSERVER/ WARNING ORDER "You, this is Me, Fire Mission"	
--TRANSMISSION BREAK--	
2. FRIENDLY LOCATION GRID "MY POSITION MARKED BY ____"	
3. TGT LOCATION GRID / TRP / DEG(MAG), RANGE(M)	
4. TGT DESCRIPTION/MARK	
5. REMARKS	
--TRANSMISSION BREAK--	
<u>DONOT</u> ASK THE GUNSHIP TO ID COLORS <u>DONOT</u> REFERENCE CLOCK POSITIONS <u>DONOT</u> PASS RUN-IN OR NO FIRE HEADINGS <u>DONOT</u> CORRECT LEFT/RIGHT OR SHORT/LONG	

GENERIC ENGAGEMENT SEQUENCE 6-LINE

THE USE OF THE 6-LINE BRIEF IS FOR USE WITH ROTARY WING AIRCRAFT (R/W).

R/W AIRCRAFT ARE GENERALLY VERY CLOSE IN PROXIMITY AND FOR THAT REASON THE BRIEF DOES NOT UTILIZE EXTENSIVE AIRSPACE COORDINATION MEASURES AND PROVIDES A FLEXIBLE, RESPONSIVE BRIEFING FORMAT.

WHEN CHECKING IN R/W AIRCRAFT WILL UTILIZE THE SAME CAS CHECK-IN BRIEFING FORMAT.

THE CONTROLLER WILL THEN PROVIDE THE SITREP BRIEF BACK TO THE PILOTS.

ONCE THE SITREP IS COMPLETE PROVIDE A TALK-ON TO FAMILIARIZE THE PILOTS WITH THE OBJECTIVE AREA AND MOST IMPORTANTLY HAVE THEM LOCATE YOUR POSITION TO THE FULLEST EXTENT POSSIBLE WITHOUT COMPROMISING IT.

THEN DELIVER THE 6-LINE BRIEF IN THE FOLLOWING SEQUENCE:

A. WARNING ORDER

B. BRIEF

C. END OF MISSION OR SHIFT

AFTER THE INITIAL ENGAGEMENT THE BRIEF CAN BE SHORTENED AS APPROPRIATE IF THE INFORMATION HAS NOT CHANGED OR THE PILOTS HAVE FAMILIARITY WITH THE SITUATION.

HOWEVER DO NOT CONTINUALLY EXPOSE THEM FROM THE SAME RUN-IN.

THIS BRIEF CAN BE USED FROM A STATIONARY POSITION OR ON THE MOVE DURING A PATROL/CONVOY OR OTHER TACTICAL MOVEMENT.

HASTY ACM'S

A

D



B

C

FW KEY HOLE TEMPLATE (HASTY)

- Upon check in pass center grid of objective
- From center grid pass alpha numeric with associated distance in NM
for CP/IP and orientation "Center grid TP 8746 9347, proceed C 10."

Appendix J

Convoy Commander A/C Escort Planning Card

1. CALL SIGN (A/C AND CONVOY)
2. ENEMY
 - a. SALUTE
 - b. EXPECTED ENEMY CONTACT-WHEN, WHERE, TYPE
 - c. MPCOA, MDCOA
3. FRIENDLY
 - a. SITUATION
 - b. KNOWN ADJACENT CONVOYS, PATROLS, FRIENDLY SNIPERS, AND UNITS
 - c. FREQs, CALLSIGNS, MARKING
4. CONVOY
 - a. # AND TYPE OF VEHICLES IN CONVOY
 - b. DISTANCE BETWEEN VEHICLES
 - c. LIGHTS ON OR OFF
 - d. 12 O'CLOCK IS _____
 - e. FRIENDLY VEHICLE MARKING
 - f. PLANNED ACTIONS UPON CONTACT-DISMOUNT, BUTTON UP, ETC.
 - g. FRIENDLY DISMOUNT LIMIT OF ADVANCE AFTER CONTACT
 - h. CRITICAL POINTS/EVENTS DURING CONVOY
5. COMMUNICATIONS
 - a. FREQUENCY (VHF AND UHF, CLEAR/SECURE)
 - b. CONTACT POINT AND TIME
 - c. REPORT CRITERIA, (I.E. EEI's, MINES, OBSTACLES, CROWDS SUSPECTED IED's, BLACK CLOTHING, SUSPECTED DANGER AREAS
 - d. CHECKPOINT REPORT RADIO PROCEDURES
 - e. ASSUME LOST COMM IF____MINUTES OF NO CHECK-IN
 - f. LOSS COMM SIGNAL PLAN
 - g. CODEWORDS-ENEMY CONTACT, HALT, ALT ROUTE, DETACH
6. CONVOY ROUTE/ALT ROUTE
 - a. CHECKPOINTS
 - b. HALT POSITIONS
 - c. RATE OF TRAVEL
 - d. TERMINATION POINT AND EXPECTED DETACH TIME
 - e. ETE
7. AVIATION ASSETS
 - a. # AND TYPE OF AVIATION ASSETS
 - b. LOCATION OF AIR CONTROLLER IN CONVOY
 - c. PREPLANNED CASEVAC LZ's
 - d. DOWNED AIRCREW PICKUP POINTS
 - e. TRAP PROCEDURES
 - f. PREPLANNED RW ATTACK GEOMETRY
 - g. FINAL PROTECTIVE AIR-FIRES PLAN

- h. KNOWN, SUSPECTED AIR THREATS (MANPADS, AAA, SMALL ARMS)
 - i. IR OBSTACLES-WIRES, TOWERS, BUILDINGS
 - j. TYPE ESCORT REQUESTED- ATTACHED/DETACHED
 - k. REQUESTED ORDNANCE LOAD
 - l. FW AVAILABLE-RESPONSE TIME, FREQ, CALLSIGN
- 8. FIRES
 - a. TARGET MARKING-M203 SMOKE, ILLUM, IR POINTER, DIRECT FIRE, TALK-ON
 - b. CONVOY CREW SERVED WEAPON AVAILABLE
 - c. TRP's
 - d. ROE-ENGAGEMENT/DISENGAGEMENT CRITERIA
 - e. FSCMS-(NFA's, RFA's)
 - f. IR POINTER LOSS COMM PLAN
 - g. EXPECTED TYPE OF CONTROL
- 9. COORDINATING INSTRUCTIONS
 - a. TIME/PLACE FOR OPORDER

Appendix K

Fire Support Availability Matrix

Fire Support Asset Availability Matrix. This is a tool that will assist the Convoy Commander plan and execute fires in support of his convoy. Fire Support information should be listed in sequential order, based on the convoy route.

- **Column A:** Line number.
- **Column B:** Checkpoints on the route, covered by a particular asset. Column B will be one of the last items filled in once range rings of supporting assets are known.
- **Column C:** Fire Support asset which covers a specified portion of the route. For surface firing assets, list the following for that asset: Company or Battery, Battalion/Regiment, and caliber of the weapon system. For example: "C 1/11 155" means that the agency is Battery C, 1st Battalion, 11th Marines, 155mm. Wpns 1/1, 81mm would identify the 81mm platoon from Weapons Company 1st Battalion, 1st Marines.
- **Column D:** Location of the asset listed in MGRS (military grid reference system) grid.
- **Column E:** Yes or No reminder. Has the Convoy Commander plotted the range rings for the given asset on his map? This applies for both surface fires and aviation fires. While fixed wing should be covering the entire AO, rotary wing will be tied to a specific Firm Base, FARP or FOB.
- **Column F:** Azimuth of Fire (AOF) of the surface firing agency or the Initial Points (IPs) for FW aircraft and Battle Positions (BPs) for rotary wing aircraft. If the primary AOF does not cover the convoy route, will the battery or platoon shift trails to provide fire support and how long will that take? IPs and BPs should be planned throughout the area of operations. IPs are typically 7-10 nautical miles from the target area or about 1 minutes flight time for fixed wing aircraft. BPs are typically 2 x 2 kilometer areas from which rotary wing assets will employ their weapons or attack from.
- **Column G:** Shift time for the surface asset (artillery and mortars) to shift trails to support the convoy.

Depending on the asset, this will increase the response time from 1-7 minutes.

- **Column H:** Call sign of the fire support agency
- **Column I:** How the Convoy Commander will establish radio contact with that agency. List all means available. This could be VHF, UHF, satellite or cell phone, or Blue Force Tracker. Additionally, frequencies and call signs should be known for the higher fire support coordination center and direct air support center (to include DASC(A) and TAC(A)). The convoy should never be in a situation where it cannot contact an agency to assist in completing the request for fire support.
- **Column J:** Munitions available. Assists the Convoy Commander in achieving desired fire support effects against the enemy.
- **Column K:** Probability of Incapacitation (PI) or risk estimate distance. The Convoy Commander uses columns C and J to determine entries into the PI tables. The PI means that a Marine is physically unable to function in an assault within a 5-minute period after an attack by fire support assets within that distance. In layman's terms, the individual terminally controlling fires for the convoy must accept risk if he chooses to attack targets inside the 0.1% PI range. PI data is listed in the MCWP 3-16 Appendix O, pages O-9 and O-10 and JFIRE Multi-service Procedures for the Joint Application of Firepower Oct 2004
- **Column L:** Any remarks or items not covered.

Once this information is gathered, it should be plotted on all Convoy Element Leaders' maps so they will know the following information:

- Where fire support is available along their convoy route
- What type of fire support they will have
- Responsiveness of available fire support assets
- Any gaps in fire support coverage that may require them to request additional assets

Fire Support Asset Availability

A	B	C	D	E	F	G	H	I	J	K	L
Line #	Check points covered	Asset	Location	Rg Ring	AOF / IP/BP	Shift time (Arty)	C/S	NET ID / Freq Phone #	Munitions avail	P _i	Remarks

Figure 2-1 Fire Support Asset Availability Matrix

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Appendix L

Intelligence and Reconnaissance Assets

Intel and Reconnaissance - Intelligence support for convoy operations is critical. Means of gathering and disseminating information rapidly change and vary from theater to theater. This appendix will focus on the types of collection platforms, capabilities and limitations of platforms, and methods of dissemination that are applicable to the Convoy Commander.

Ground Reconnaissance

- Special Operations Forces (SOF): SOF generally receives tasking from Division/Corps level or higher. SOF may be integrated into any operation. Although SOF forces may not be in direct support of a convoy, it is important that Convoy Commanders have an understanding of the location of SOF teams along the convoy route, types of vehicles, markings, call signs, frequencies, and general capabilities. SOF teams may consist of Marine Corps Force Reconnaissance, Navy Seals, US Army Special Forces, USAF Special Tactics Teams, SOCOM Components, or ODA/OGA teams. SOF operate outside a Convoy Commanders scope of operations but may be located along the convoy route performing duties such as human exploitation, image gathering, NAI observation, TAI observation, small scale raids, or various other tactical tasks. Convoy Commanders should be aware of the presence of such teams in order to avoid fratricide. Teams may vary in size from 6 men to platoon size dependent upon the mission, and may travel in military or civilian vehicles.
- Marine Corps Reconnaissance: These forces are a Division asset and generally operate in 6-12 man teams and travel in HMMWVs or IFAVs, and perform tasks similar to SOF. It is more likely that the Convoy Unit Movement Control Center (UMCC) will have visibility on the locations or Area of Operation (AO) of these assets, compared to SOF.
- Light Armored Reconnaissance (LAR): LAR is a Division level asset but may be tasked to support regiments or battalions. The mission of LAR is to conduct reconnaissance, security, and limited offensive and defensive operations as directed by the division or supported commander. LAR battalions consist of LAV-25's (25mm chain gun), 81mm mortar, Anti-Armor (TOW), command and control (C2), wrecker, and logistics variants. LAV-

25's may carry up to 6 scouts and have a full compliment of dismounted weapons systems. LAR may perform route security, convoy security, screening missions, raids, QRF, VCP's, mounted and dismounted patrols.

- Other Forces: Marine Corps infantry battalions have other assets that may be located along a route. These forces include Surveillance Target Acquisition (STA), consisting of 3-6 man teams (typically with at least one sniper) assigned to conduct reconnaissance for the battalion. STA teams are generally dismounted and may provide overwatch on key terrain along a route, NAI/TAI observation, or sniper and counter sniper operations at the battalion level. Combined Anti-Armor Platoon (CAAT) is often assigned reconnaissance tasks for a battalion, similar to LAR. CAAT consists of HMMWVs (TOW/.50cal/MK19) and IFAVs (Javelin/M240G). Convoys may see these elements conducting mounted patrols, manning VCPs, performing screening missions for the battalion, or a mounted QRF.

Aviation Reconnaissance. Every aviation platform performs reconnaissance. At the conclusion of a flight, aircrews submit a Mission Report (MISREP), which may provide pertinent information on a convoy route. Below are listed the different Marine Corps aviation platforms and the types of sensors each may employ to collect information:

- AH-1W (Cobra) - Night Targeting System with a Forward Looking Infrared (FLIR), Charged Coupled Device-television (CCD-TV), and Direct View Optics (DVO). May provide VCR tape of route using CCD-TV or FLIR.
- UH-1N (Huey) - Star SAFIRE FLIR or BRITE Star, which includes FLIR and CCD-TV. May provide 8mm tape of route.
- AV-8B (Harrier) - Lightning-AT Pod which provides 8mm tape for viewing.
- FA-18 (Hornet) - Lightning-AT Pod, AT-FLIR both of which are 4th generation targeting pods. The legacy pod is the Nighthawk, which is not as capable as the Lightning or AT-FLIR.
- EA-6B (Prowler) - Electronic Intelligence (ELINT), mainly used for early warning radars and RF SAMs. However, this platform provides significant jamming capabilities against communications and radar systems that may be applicable to convoy operations.
- CH-46 - Aircrew equipped with NVD or binocular

- CH-53 - Navigational FLIR and aircrew equipped with NVD or binocular.

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Appendix M

Electronic Warfare Assets

Marine Corps

- EA-6B Prowler: The primary mission of the EA-6B is to perform electronic attack (EA) by jamming hostile radars, electronic data links and communications. The EA-6B war fighting systems includes the ALQ-99 on board receiver, the ALQ-99 pod mounted jamming system, and the USQ-113 communications jamming system. The EA-6B's ALQ-99 OBS is also used to collect tactical electronic order of battle (EOB) data which can be disseminated through the command and control system while airborne, and which can be recorded and processed after missions to provide updates to various orders of battle.
- Radio Battalion (RADBN): Tasked with providing tactically focused Signals Intelligence (SIGINT), conducting electronic warfare, communications security monitoring and analysis, and special intelligence communications in direct support of Marine Air Ground Task Forces (MAGTF). Capabilities include collecting, analyzing and disseminating intelligence derived from a tactical environment. RADBN can conduct Direction Finding (DF) and identify critical C2 nodes within enemy communications architecture. Additionally, they can disrupt or jam enemy tactical level communications; tip airborne EA assets as non-kinetic targets emerge; and provide timely BDA feedback ISO non-kinetic fires. Size and level of support depends on needs of supporting unit.

Army

- Guardrail: Consists of equipment installed in a modified Beechcraft Super King Air aircraft with a military designation of RC-12. Provides near real-time SIGINT and targeting information to Tactical Commanders throughout the corps area. Guardrail collects selected low, mid, and high band radio signals, identifies/classifies them, determines locations of their sources, and provides near-real-time reporting to tactical commanders.
- Prophet: Designed to provide force protection in a direct support (DS) role to the maneuver brigade, Prophet (AN/MLQ-40) is a High-Mobility Multi-purpose Wheeled Vehicle (Humvee)-mounted, signals-intelligence system

(SIGINT), capable of receiving, intercepting and direction-finding radios. Prophet can be in a mounted or dismounted configuration.

Air Force

- EC-130 Compass Call: Commando Solo conducts psychological operations and civil affairs broadcast missions in the standard AM, FM, HF, TV and military communications bands. Secondary missions include command and control communications countermeasures (C3CM) and limited intelligence gathering.
- RC-135 Rivet Joint: RIVET JOINT aircraft are capable of conducting Electronic Intelligence (ELINT) and Communication Intelligence (COMINT) intercept operations against targets at ranges of up to 240 kilometers. RIVET JOINT provides direct, near real-time reconnaissance information and electronic warfare support to theater commanders and combat forces. RIVET JOINT has an on-board sensor suite, which allows the mission crew to detect, identify and geolocate signals throughout the electromagnetic spectrum. The mission crew can then forward gathered information in a variety of formats to a wide range of consumers via an extensive communications suite.

Navy

- EP-3E ARIES II: Provides near real-time electronic reconnaissance support to Tactical Commanders through detection and identification of tactically significant electronic signals. The EP-3E uses a complex combination of receivers, antennas, computers, displays, and recording devices to accomplish its primary mission of Electronic Support (ES).
- EA-6B Prowler: Same as USMC EA-6B Prowler.

Other Capabilities

- A variety of other ground based and air employment options exist as force protection measures that are beyond the classification of this document. Contact the I MEF Electronic Warfare Officer (EWO) at DSN 318-340-1244 for more information.

Appendix N

Readiness Conditions

Readiness Conditions are METT-TSL / SOP dependent and contain priority task requirements. REDCON is increased as mission execution nears. Guidance from the higher headquarters should dictate a change in REDCON status. Below are suggested REDCON minimums and may be adjusted to support unit mission timelines/tasks:

REDCON – 1: (Full alert) Be prepared to move immediately.

- All personnel alert and ready for movement (loaded)
- Vehicles loaded and secured, weapons manned
- Vehicle engines running/short count conducted*
- Actuals man nets

REDCON – 2: (Full alert/engines off) Be prepared to move in 15 minutes.

- All personnel alert
- Engines off
- Prepared to execute short count
- Test fire already complete, if in staging area
- Final communications checks complete
- Nets monitored

REDCON – 3: (Reduced security) Be prepared to move in 30 minutes.

- 50 percent of each crew/squad stand down for continuing actions to include: vehicle maintenance; weapons maintenance; chow; and final preparation/inspection.
- Remaining 50 percent, man vehicles, weapons, monitor radios.
- Final communications checks conducted
- Test fire conducted
- Final staging complete

REDCON – 4: (Preparation phase/minimum security) Be prepared to move in one hour.

- Staging conducted
- Pre-combat inspections conducted.
 - Vehicle fluids/tires/general PMCS conducted
 - Weapons function checks conducted (head space and timing confirmed)
 - Radios and components function checks conducted
 - BFT/FBCB2 address confirmation conducted
 - Windshields and headlights cleaned
 - Vehicle marking day/night confirmed
 - Individual inspections complete
 - Vehicle load plan confirmed (stowed for IED impact)
 - Ammunition issue completed
 - Logistics confirmed
- Short count defined- method by which all vehicles are started simultaneously on command as to mask number and type of vehicles.

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Appendix 0

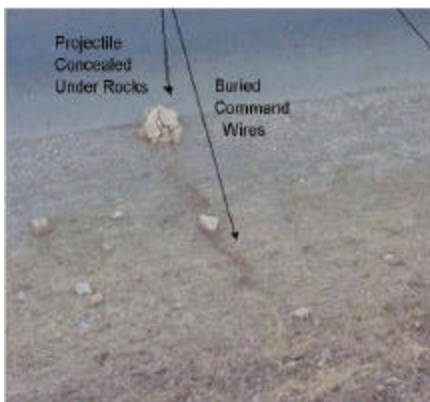
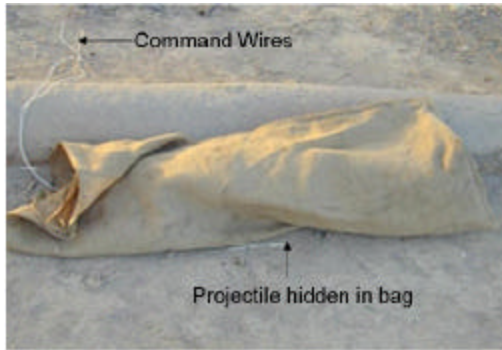
Improvised Explosive Devices (IEDs)



Photo 1: IED Detonated on Passing Convoy

Improvised explosive devices (IEDs) are the most dangerous and effective weapons a convoy commander may face when conducting a convoy. They inflict more casualties than all other weapon systems combined. The IED can be made from a variety of materials including vehicles (VBIED). The best TTP a convoy commander can train to is vigilance, attention to detail, identification training and 360 degree security at all times.

Definition: An IED is a device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals and designed to destroy, incapacitate, harass, or distract.



Characteristics: IEDs have four main components:

1. Main Charge: Projectiles, mines, initiators, etc.
2. Power Source: Batteries
3. Switch: Timers, remote, R/C
4. Container: Box, animal carcass, etc.



Four Main Types of IEDs

1. Time. Time IEDs are designed to function after a pre-set delay, allowing the insurgent to make his escape or to target Coalition Forces that have created a pattern.

a. Types. Igniferous, Chemical, Mechanical and Electronic.

2. Command. Command Initiated IEDs allow the insurgent to choose the optimum moment of initiation. They are normally used against targets that are in transit, or where a routine pattern has been established.

a. Types. Command Wire, Radio Control.

3. Victim Operated. A Victim Operated IED is a means of attacking an individual or group of individuals, or for use in a "come-on" scenario attack (e.g. reacting to a real or fabricated incident).

a. Types. Pull/Trip, pressure, Release of Pressure, Movement Sensitive, Light Sensitive and a range of electronic switches.

4. Projected. Projected weapons offer the insurgent the ability to deliver an explosive charge to a target with a stand off between the firing point and the contact point. Projected refers to the means of delivery, but are initiated on command, time or victim operated mechanisms.

a. Types. Mortars, Rockets, Grenades, and Guided Weapons.

MOST LETHAL: Currently, the most lethal type of IED is a Vehicle Borne/Suicide Vehicle Borne IED (VBIED/SVBIED). This consists of an explosive laden target, and initiated either while it is parked or in motion.

COMMON EMPLACEMENT OF IEDs

- In the median, by the roadside or buried under the surface of any type road.
- Elevated, in trees, light posts, overpasses and bridge spans.
- Hidden inside and under any type of material or packaging.

- Attached underside of unattended vehicles.
- Installed in parked cars, trucks, motorcycles and carts.
- As secondary IEDS near another IED or Point Of Origin (POO) sites.
- Especially designed to target QRFs, first responders, cordons, checkpoints and incident Control Points (ICP)
- In a daisy-chained configuration

POTENTIAL IED INDICATORS

1. Changes in community patterns. Be alert to fewer people or vehicles in a normally busy area, open windows, and the absence of children playing.
2. Colors. Notice clues unintentionally provided by the enemy such as exposed red DETCORD or other parts of the IED. Look for contrasting colors, freshly disturbed dirt (darker in color) or concrete that does not match the surrounding areas.
3. Markers. Watch for tires, rock piles, ribbon or tape that seems out of place on the side of the road. They may be marking IED locations and aiming references for the insurgent.
4. Shapes. Take note of object outlines that seem out of place for the environment that you are in.
5. Graffiti. Be aware of symbols or writing on buildings and walls that might serve as a warning to locals.
6. Signs. Pay attention to newly erected placards and signs that seem out of place or might serve as a warning to locals and messages to the insurgents.
7. Remain watchful for remote controlled IED trigger devices. Examples would be personnel carrying remote garage door openers and keyless entry for automobiles.

BE ALERT TO

- Vehicles following your convoy for a long distance and then pulling off the side of the road.
- Dead animals along the roadways.

- Freshly dug holes or pavement patching on or alongside the road.
- New dirt, rock or gravel piles
- Obstacles in the roadway used to channel the convoy
- Personnel on overpasses.
- Signals with flare or city lights or fires as convoy approaches.
- People taping ordinary activities or military movement.
- Wires laid out in plain sight.

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Appendix P Convoy ORM and Risk Reduction Worksheet

MISSION:		CONVOY CDR			ACC	
PLANNING						
GUIDANCE	PREPARATION TIME				SCORE	
	OPTIMUM	ADEQUATE	MINIMAL			
HEY YOU	3	4	5			
FRAGO	2	3	4			
OPORD	1	2	3			
MISSION CONTROL						
TASK ORGANIZATION	TYPE OF CONVOY				SCORE	
	ADMIN	TACTICAL DAY	TACTICAL NIGHT			
OPCON	3	4	5			
ATTACHED	2	3	4			
ORGANIC	1	2	3			
MARINE ENDURANCE						
REST IN LAST 24 HRS	LENGTH OF OPERATION				SCORE	
	1-2 HR	3-5 HR	6-8 HR	9+ HR		
0-3 HOURS	3	4	5	6		
4-5 HOURS	2	3	4	5		
6+ HOURS	1	2	3	4		
TRAFFICABILITY						
TERRAIN TYPE	ROAD TYPE				SCORE	
	IMPROVED	UNIMPROVE D	TRAIL	CROSS COUNTRY		
MOUNTAINOUS	3	4	5	5		
DESERT/JUNGLE	2	3	4	5		
FLAT/ROLLING	1	2	3	4		
MARINE SKILLS						
TASK	EXPERIENCE				SCORE	
	EXPERIENCED	FAMILIAR	NOT EXPERIENCED	OJT		
COMPLEX	3	4	5	5		
ROUTINE	2	3	4	5		
SIMPLE	1	2	3	4		
VISIBILITY						
TERRAIN TYPE	WEATHER/LIGHT				SCORE	
	CLEAR/DAY	RAIN/DAY	SNOW/DUST/DAY	NIGHT		
MOUNTAINOUS	3	4	5	5		
DESERT/JUNGLE	2	3	4	5		
FLAT/ROLLING	1	2	3	4		
TOTAL SCORE	0-12	13-20	21-25	26+	TOTAL	
RISK LEVEL	LOW RISK	MEDIUM	HIGH RISK	VERY HIGH		
APPROVAL LEVEL	SQD LDR	PLT CDR	CO CDR	BN CDR		
NOTE: IF 2 OR MORE AREAS ARE ASSIGNED RISK FACTORS OF 5 OR MORE, THE OVERALL RISK IS CONSIDERED HIGH. ADD 3 POINTS TO THE TOTAL FOR HAZARDOUS OR SENSITIVE ITEMS CARGO.						
Approving Authority Signature: _____				Date: _____		
Briefed By: _____				Date: _____		
VC Initials: _____		Driver Initial: _____				

CONVOY RISK REDUCTION WORKSHEET				
Check all that Apply	Hazard	Risk Level (Low, Med, High)	Control Measures	Residual Risk
	Adverse Terrain		Drivers training, convoy brief	
	Air Attack		Convoy defense, battle drills, harden vehicles	
	Ambush		Convoy defense, battle drills, harden vehicles	
	Barricades		Convoy defense, battle drills, harden vehicles, breach teams	
	Blackout Drive		Driver training, convoy brief	
	Breakdown		PMCS, PCIs, class II, strip maps	
	Exhaust Fumes		Enforce no sleep rule (VC), PMCS, PCIs	
	Cargo (HAZMAT)		Training, PCIs	
	Civilians		Commo, convoy briefs, training	
	Cold Weather		Cold weather training, PCIs	
	Communication		Training, comm personnel, PMCS, PCIs	
	Desert Environment		Training, convoy briefs	
	Disorientation		Convoy briefs, strip maps, training (PLGR, BFT, etc)	
	Driver Inexperience		Driver placement, training	
	Enemy ATK		Rehearsals, battle drills, convoy briefs, harden vehicles	
	Fratricide		panels, on vehicle, battlespace geometry, markings, commo	
	Halt		Rehearsals, battle drills	
	Heat		Water, rest halts, convoy briefs (safety)	
	Heavy Rain		PMCS, driver training, reduce speed	
	Limited Visibility		NVGs, chemlight markings, training	
	Long Hauls		Driver's training, SOPs, rest halts, convoy briefs	
	Minefield		Rehearsals, battle drills	
	Mud		Recovery Training, driver's training (AWD)	
	NBC attack		Rehearsals, PCIs, recons, commo, training (NBC Teams)	
	Recovery Operations		Training (with maint, self recovery, tow bar	
	Reduced Visibility		Intervals, chemlight markings, training	

	Roll Over		Driver's training, recovery, SOP's, (seatbelts, kevlar)	
	Sleep Deprivation		Enforce sleep plan, rest stops, work rotations	
	Sniper Fire		Battle drills, convoy briefs, training	
	Snow/Ice		reduce speed, drivers training	
	Strong Winds		Reduce speed, driver's training, convoy briefs	
	Sudden Halt		Intervals, training, battle drills (SOPs)	
	Sunlight		Clean windows, ballistic sunglasses	
	Fire		Fire extinguishers, evacuation drills	
	IED attack		Battle Drills, driver's training, ballistic glasses, kevlar	

DEFINITIONS

HIGH- GOOD CHANCE OF DEATH OR SERIOUS INJURY

MED-MAY CASUE INJURY OR POSSIBLE DEATH

LOW-LITTLE CHANCE OF DEATH OR INJURY

Appendix Q

Armor Plating Systems for Vehicle Hardening and Survivability Enhancements

The following photos represent the variations in armor systems that are currently being used within the Marine Corps and DOD in OIF II:



Photo 3-1: SAPI Plate Reinforcement on Doors



Photo 3-2: HMMWV L-Shaped Armor



Photo 3-3: MTVR PA Armor Kit



Photo 3-4: MTVR PA Armor Kit



Photo 3-5: Up Armor HMMWV

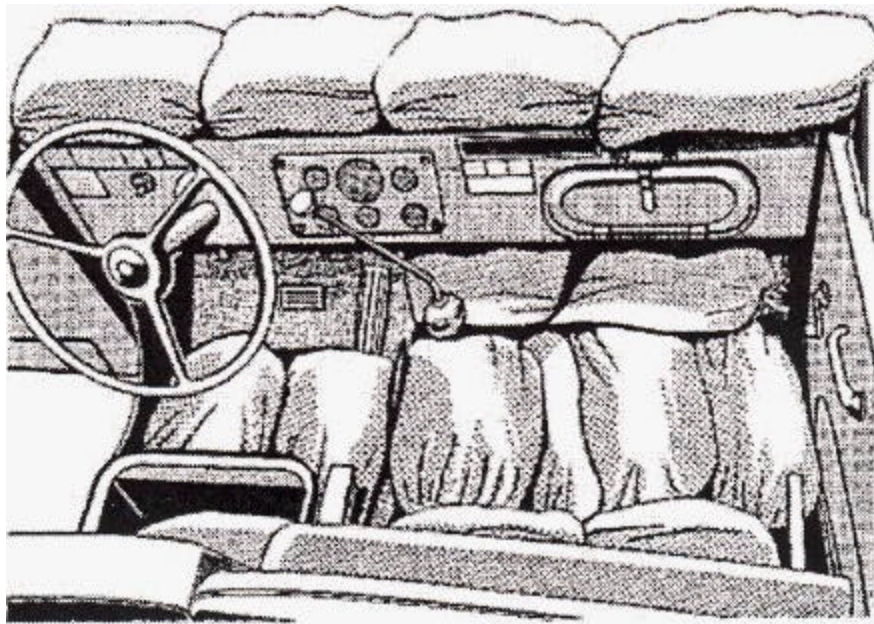


Photo 3-6: Floorboards Reinforced with Sandbags



Photo 3-7: MTRV bed reinforced with sandbags and shoring

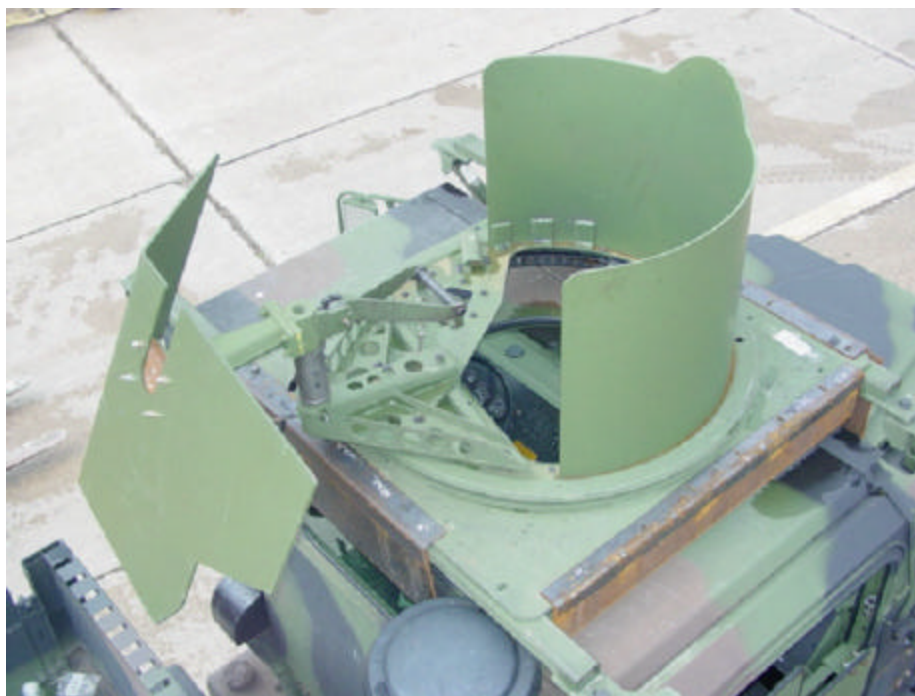


Photo 3-8: MTRV Gunners Shield With Skirt



Photo 3-9: Marine Armor Kit (MAK)



Photo 3-10: Wheel Blast Deflector



Photo 3-11: HMMWV Marine Armor Kit Door Assembly



Photo 3-12: Belly Pan Blast Deflector

Appendix R

SOPs, Proficiency and Training

SOPs

SOP Development. FM 101-5 states: *Commanders should use SOP to standardize routine or recurring actions not needing their personal involvement.* SOP development will be unique to each unit, based on mission sets, and is guided by a desire to make the unit more efficient and combat ready. SOPs should address: Actions on Contact; Vehicle Load Plans; Vehicle Numbering Diagrams; Spread-loading of crew-served weapons; Vehicle Marking; PCC/PCI standardization and checklists; post-combat actions; security procedures at a halt; etc.

SOP Development Example. Because SOPs are unique to each unit, Commanders must evaluate requirements of HHQ SOP to ensure they are applicable to his individual unit. For instance, the HHQ SOP may state that all convoys that come under enemy contact will exit the kill zone, close with and destroy the enemy. While this may be applicable to infantry units, an MWSS unit that deploys convoys hauling large amounts of fuel and ammunition may need to evaluate how the HHQ SOP affects its mission accomplishment and adjust its SOP accordingly. An answer, to meet the HHQ intent, is to suppress the enemy, move through the kill zone and continue the mission. This is only one hypothetical example and may not be the only answer. All deviations from HHQ SOP must be briefed to and approved by HHQ.

CREW DEVELOPMENT

Crew Development - A common practice in infantry units, such as Combined Anti-Armor Team Platoons (CAAT Platoon), is to assign 4 or 5 personnel to a given vehicle. This facilitates crew cohesion and cannot be overestimated. Units should strive to form and maintain regular vehicle crews. This facilitates a sense of ownership of vehicles, which typically leads to more effective maintenance, consistent load plans, crew cohesion and coordination. In turn, this will lead to more effective crew drills and crew/vehicle efficiency. Crews operate on the same principles as a dismounted fire team. Each Marine is assigned a primary task and is cross-trained to perform other tasks within the crew. The objective is to create a

cohesive fighting unit, capable of sustaining itself under fire. All units should attempt to develop specific crews for each vehicle. Recommended minimum crew/team composition is as follows:

- 7-TON: Driver, Vehicle Commander, Gunner. (Current vehicle configuration does not facilitate this, it is suggested this vehicle have a crew of at least three personnel in a tactical convoy.)
- HMMWV: Driver, Alternate Driver, Vehicle Commander, Gunner, A-Gunner.

PROFICIENCY

Proficiency in the Basics. The following is a list of basic skills that every Marine participating in Convoy Operations should be equipped with, regardless of MOS. A layman's explanation of "Basic Proficiency" follows each skill. For a more precise definition of each consult the Mission Essential Task List (METL) or Individual Training Standards (ITS) for your unit. These can be found in MCO 3501.XX for individual units/MOS.

- Mount and Dismount Drills. A basic understanding of how to mount and dismount vehicles, as an individual and as part of a team, with a loaded weapon and/or while weapons are being employed from a vehicle. Procedures should include multiple vehicle configurations to account for the different types of up-armor systems being applied to vehicles. Procedures should include movement from the vehicle into a cohesive combat unit (the whole convoy team) on the ground, capable of defending itself.
- Personal Weapons Training: Knowledge of basic functioning of the assigned weapons conditions and clearing of stoppages via immediate and remedial actions. Individuals should be proficient with employing assigned weapons at the sustained rate and the rapid rate, and know when those rates of fire apply. Marines should be required to cycle through the weapons conditions frequently to make them conscious of handling loaded weapons. Beyond the Known Distance (KD) Course of Fire, Marines must be familiar with engagement of targets in a stationary

environment, within a sector of fire, once dismounted. Reference Duty area 11 of MCCC Handbook.

- Crew-Served Weapons Training: Marines within a vehicle crew must be familiar with basic machine gun employment. An understanding of target precedence and engagement techniques is paramount. Rapid and Sustained rates of fire for the assigned weapon must be understood, as well as firing commands to keep the gun in action. Proficiency in barrel changes, ammo replenishment, immediate and remedial actions, and maximum effective engagement distances are all necessary functions of manning a machine gun.
- Night Vision/Thermal Devices (optics): Knowledge and practical application of night vision devices (AN/PVS-7B or AN/PVS-13), thermal optics (PAS-13), and infrared scopes (AN/PVS-17) is essential. A practical understanding of the capabilities and limitations of each of the assigned systems, as well as target identification using assigned systems, is crucial. Attention should be paid to methods of focusing, bore sighting, and employing the systems from both head mounts and from weapons mounts. Methods of how to care for systems should also be taught and understood.
- Laser/Pointer Use: Individuals should have a working of knowledge of common weapon mounted Infrared pointers such as the AN/PEQ-2A. Knowledge should include how to employ, bore sight, and care for the assigned system.
- Radio/Communications Training: Each Marine in an assigned vehicle crew, regardless of MOS or whether the vehicle has mounted radios, should be proficient at basic radio operations. This includes: how to set-up a radio for operation; how to load a frequency; how to switch to and from encrypted to non-encrypted communication (SC/PT, FH/CT, SC/CT); and how to care for and troubleshoot VHF radios. Procedural methods of how to communicate using VHF radios are a must.

- Basic Driving Skills: Crewmembers should have a working knowledge of how to operate the assigned vehicle in the event the driver becomes incapacitated. This does not require that each member be a licensed driver, only that they know how to take control of the vehicle and get it out of a kill zone and maintain operation for survivability and mission accomplishment.
- Map/Navigation Skills: Crewmembers must have a basic understanding of how to read a map, how to terrain associate, and how to read and apply doctrinal terms and graphics. Reference Duty area 18 of MCCS Handbook.
- Call For Fire: Each crewmember should be proficient in conducting a call for fire mission. A working knowledge of the 6 elements of the call for fire, three transmission bursts, and how to doctrinally adjust fires prior to the fire-for-effect call is the standard.
- Basic First Aid: Each crewmember should know how to inventory, care for and maintain the first aid kit. In addition, each member should be proficient at "Buddy-Aid" and methods of application in and outside of a vehicle. It is also necessary to review the methods of carry for casualties and assign litter teams. Reference Duty area 21 of MCCS Handbook. More combat lifesavers is always a benefit to the Convoy Commander.
- Casualty Evacuation: Understanding doctrinal methods of how casualties are removed from the battlefield (via air or ground) is essential. Crewmembers should know what a casualty collection point is, how to utilize the CASEVAC NATO 9-Line brief, which radio nets to use when requesting CASEVAC, and a basic understanding of triage and why it is important. Reference Duty area 21 of MCCS Handbook.
- Situational Awareness/ATFP: Crewmembers should be trained in basic principles of how to present a hard target to the enemy. This includes, but is not limited to, the proper use of up armor systems, proper wearing of gear, and weapons posture. In

addition, members traveling in a convoy should be trained to observe areas surrounding the route, while traveling, in order to identify potential threats, suspicious activity, or changes on a regularly traveled route.

- EPW Handling: A basic understanding of Search, Segregate, Silence, Secure, Speed, and Tag (5 S's and a T). Crewmembers should be familiar with the EPW handling and tagging process, in a practical application environment, in accordance with established Rules of Engagement (ROE). Practical application should include the use of buddy teams and the use of a cover man with individual and multiple EPW's.
- Vehicle Searches: Crewmembers should be familiar with basic vehicle search techniques utilized at hasty Vehicle Checkpoints (VCPs).
- Basic Vehicle Recovery/Destruction: Crewmembers should be familiar with how to perform basic vehicle recovery operations. They must be knowledgeable in how to rig a vehicle for tow, using approved methods and hasty methods, as well as proven methods for preparing a vehicle for destruction and reconciliation/accountability of sensitive items.

Proficiency in Advanced Convoy Operations. The following information may not necessarily be found in a MCO. It is a compilation of tasks that Marines may be required to regularly perform during Convoy Operations, regardless of MOS. Therefore, each Marine should be knowledgeable in performing these tasks once the basic skills have been mastered.

- Mount and Dismount Drills During a Live-Fire: In a live-fire environment, crews should perform mount/dismount drills while engaging targets. Basic skills of how to fire and move, small unit tactics, covering fire, target discrimination, should all be rehearsed and performed while in a live-fire environment.
- Threat Weapons Training: Crewmembers should have a basic understanding of threat weapons encountered on

the battlefield, how to employ threat weapons, ranges at which weapons can affect the convoy, and acquisition methods for threat weapons.

- Crew-Served Weapons Firing While Moving: Crewmembers should be familiar with “firing while moving” techniques and perform a familiarization fire from a moving vehicle. Crews should perform this action in an environment where ammunition reload drills, barrel changes, and use of a T&E are all included in the training exercise. (Not a preferred method but in some cases may be necessary)
- Night Vision/Thermal Devices (optics) Employment During Live-Fire: Crewmembers should participate in a live-fire event using assigned night vision devices and thermal sights described above and must be familiar with engagement techniques and methodology. Static shoots and fire and movement should be part of the training.
- Radio/Communications Advanced Training: Crewmembers should be familiar with the Command and Control structure and how to utilize doctrinal nets to perform needed actions applicable to a convoy. Situations include, but are not limited to: CASEVAC; Call for Fire; Immediate JTAR/ASR; Close Air Support; EOD contact team; and the use of air assets to guide/escort a convoy. In addition, crewmembers should be familiar with how to use SATCOM, Satellite phones, UHF radios, HF radios, BFT and FBCB2 chat (see Fig 1-3), and foreign cell phone systems. The dangers of talking “in the clear” on any communications system should be reinforced.



Figure 1-3
FBCB2
Blue Force Tracker

- Advanced Driving Skills: Crewmembers should be trained to maneuver through constricted terrain and urban environments; understand how to perform a standard herringbone; maintain proper interval and speed; conduct the "Frogger" technique; IED avoidance and bypass techniques while moving; and vehicle placement, relative to the enemy location and surrounding terrain, which will best facilitate weapons employment. All skills listed above must be trained in both day and night conditions (NVD employment).
- Strip Map Generation/Navigation Skills: Crewmembers should be familiar with methods of creating strip maps. Strip maps should reflect known distances between checkpoints (based off map study) in order to facilitate the use of the vehicle odometer in assisting with navigation along a convoy route. Strip maps should include the following: check points; pre-planned target locations; pre-planned helicopter landing zones (HLZ); terrain features; key urban features; rally points; friendly positions; casualty collection points; and ambulance exchange points. Strip maps should graphically depict the convoy route in a manner that any convoy member can understand.

- CAS Procedures: Basic skills of how to conduct Close Air Support (CAS) should be taught. Considerations of munitions employment, aircraft engagement techniques, 9-line brief, 6-line brief, and the "talk-on" should be included. Crewmembers should have an understanding of FAC(A) capabilities, to include which aviation platforms can serve as FAC(A) platforms. Additionally, doctrinal radio nets and methods of communication should be taught and rehearsed.
- First Aid: In addition to basic first aid, crewmembers should be familiar with the use of clotting agents, treating for shock, severe burns, severe fragmentation wounds, eye injuries, and other common wounds from small arms/IED strikes. For a current analysis of injury profiles, Convoy Commanders may consult the significant events web page of the higher headquarters in their AO. Additional training to provide advance lifesaving skills is available through the Combat Lifesaver Course distributed by US Army Medical Department Center and School. Information regarding this training can be found at <http://www.cs.amedd.army.mil/clsp/index.htm>. Each crew should have at least one combat lifesaver, or equivalent.
- Casualty Evacuation/Securing the Landing Zone: Crewmembers should have knowledge of CASEVAC via ground and air. Methods for securing landing zones; required landing zone dimensions; initial terminal guidance (ITG); marking techniques (both day and night); how to approach aircraft and patient transfer; and how to brief the CASEVAC NATO 9-line with additional identification information should all be taught.
- Situational Awareness/ATFP/Continuum of Force Drills: Techniques to assist in Marines' continued development include: Kim's Games (see glossary); practical scenarios that include talking through the escalation of force (continuum of force); and methods of identifying suspicious activity and vehicular movement. This should include having vehicle-mounted troops run through Continuum of

Force rehearsals and report the information through convoy C2 nodes.

- EPW Handling/Crowd Control: Crewmembers should be able to handle EPWs in a scenario-based training event that includes securing and controlling EPWs while involved in convoy operations, and while controlling civilian non-combatant crowds.
- Vehicle Searches in Conduct of a Convoy (VCP): Crewmembers should be able to establish a hasty Vehicle Check Point (VCP) and control traffic that may interfere with convoy operations during halts. Skills should include the ability to: create standoff from threats, re-route traffic, stop traffic, and conduct vehicle and personnel searches.

TRAINING

Training of the Security Element. Convoys will always have a security element. This element may come from an outside agency such as Military Police or a detachment of Infantry. However, in some cases units will be required to perform their own security and should not depend on outside agencies. Units should be prepared to provide their own security by training their own security elements. The security element is divided into three elements (Lead, Middle, Rear) and each element should consist of a two-vehicle team (minimum). The Security Element scouts the convoy route and protects the convoy by performing the following tasks:

- Assist in navigation of the convoy
- Identify potential danger areas
- Identify potential choke points
- Identify potential obstacles
- Identify potential and actual IED locations/emplacement
- Identify alternate routes, as required
- Conduct hasty breaching operations
- Conduct hasty VCP and road closure operations
- Conduct bridge and guardrail clearance (obstacles/height/width)
- Conduct overpass/underpass clearance
- Conduct culvert clearance

- Ensure 360-degree security during halts
- Repel/react to enemy attack

*Note: due to the complexity of Security Element requirements, Convoy Commanders and Security Element Leaders should consult FM 17-98 *Scout Platoon* for additional guidance and instruction.

Security Element Leader Considerations

Movement Techniques - The Lead Security Element will bound in and out of the convoy formation. Distances may range from 300m -1500m, or more, depending on convoy speed, terrain, and at the discretion of the Convoy Commander. This element may not always travel at convoy speed and should be trained for rapid, short movements and frequent deployment of troops equipped with basic infantry and reconnaissance skills. Principles of traveling, traveling overwatch, bounding overwatch, and move-set techniques should be understood and rehearsed. The Rear Security Element will use the same movement techniques at the rear of the convoy. The Middle Security Element has the primary responsibility to provide flank security to the convoy and will be prepared to support the Lead and Rear security elements, as required. (ref FM 17-98, Chapter 3, Section IV)

Reconnaissance Techniques

(Bridge/Culvert/Guardrail/Overpass/Underpass) - Scouting methods utilizing basic reconnaissance principles and infantry small-unit tactics, with an emphasis on maintaining convoy march speed, should be understood and rehearsed. Units will have to use variations of 3-8 man dismounted scout teams, covered by vehicle-mounted crew-served weapons to properly conduct reconnaissance of potential danger areas along a convoy route. The tempo and type of reconnaissance (deliberate or hasty) is dictated by the Convoy Commander and is METT-T dependent. Units must practice many variations of this skill set. Reference Duty area 13 of MCCS Handbook. (ref FM 17-98, Appendix B)

Appendix S
Convoy Threat and Decision Matrix Templates

Convoy Threat Matrix Blank		
- Insert Criteria	GREEN	PERMISSIVE
- Insert Criteria	YELLOW	SEMI-PERMISSIVE
-Insert Criteria	RED	NON-PERMISSIVE
-Insert Criteria	BLACK	DANGER AREA

Convoy Threat Decision Matrix Blank

	Threat			
DAY/NIGHT	(GREEN)	(YELLOW)	(RED)	(BLACK)
RING MT VEH				
CREW SERVED WEAPONS				
ARMOR				
SECURITY				
EOD				
AVIATION ESCORT				
MIN/MAX SIZE				
RADIOS/C3				
CORPSMAN				
ISR				
SCHEDULE /CHOP				
APPROVAL				

WAIVERS FROM NEXT HIGHER

Appendix T

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