

## SECTION V. AMBUSHES

## 17. General

a. Current service manuals provide sound and detailed guidance on the conduct of ambushes. Recent experience with ambushes in Vietnam reveals that, all too frequently, ambushes are well laid, properly planned and correctly positioned, but fail because of an error on the part of a single individual.

b. Selection of the site is only the first step in the development of a well organized ambush. Ambush leaders must be capable and be provided with the equipment necessary to successfully carry out their assigned mission. Squad leaders must be capable of calling in supporting arms, and be proficient in methods of blocking escape routes and utilizing booby traps, demolitions and punji traps.

## 18. Actions Prior to the Ambush

a. Make a detailed map study, including use of aerial photos whenever possible. Commit to memory the route and terrain -- particularly those features which will aid navigation. Confirm these terrain features as you pass over or near them.

b. A complete, detailed rehearsal of the ambush must be conducted to eliminate errors. Each member of the ambush party must thoroughly understand what he is to do.

c. Arrangements must be made for the employment of all available supporting fires.

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d. Movement to the ambush site by concealed routes to avoid detection by the VC or VC sympathizers is essential. Contact with civilians must be avoided.

e. Blocking forces must be emplaced in conjunction with mines, booby traps and punji stakes along likely avenues of escape in order to inflict maximum casualties.

f. Repeated occupation of the same ambush site must be avoided. Using several sites in the same general area insures better coverage and more effective results.

## 19. Conduct of the Ambush

a. Maintain light and noise discipline in the ambush site. Do not permit smoking. Failure to adhere to these basic practices is frequently the cause of an unsuccessful ambush.

b. Stress the fact that the leader of the ambush is responsible for "springing" the ambush. "Springing" the ambush too early or too late leads to failure or to only partial success.

c. Use a definite, clearly recognizable signal to commence firing. Prearrange and rehearse all signals to be used. Keep signals simple. This eliminates confusion and avoids premature disclosure of the ambush.

d. Place a heavy and accurate volume of fire in the ambush area, completely covering the killing zone and escape routes.

e. Fire low to avoid overshooting the target.

f. Use all supporting fires such as artillery, mortars, tactical air and armed helicopter support.

g. Pursue by fire when the VC jump into the under-brush opposite the ambush party.

h. Quickly exploit and search the immediate area for casualties, weapons and documents.

## 20. Night Ambush

a. The night ambush deserves particular emphasis, since most VC operations are conducted at night. Ambushes during the hours of darkness are more difficult to control, but the lack of light or illumination adds to the security of the ambush party and the confusion of those being ambushed.

b. At night a small ambush party is generally more practical because of greater ease of control and decreased probability of detection. The size of the party will depend on factors such as the size of the unit to be ambushed and the estimated VC strength in the area. Some means of illuminating the ambush site after contact must be provided so that the area may be thoroughly searched. Pre-planned artillery and mortar concentrations, hand-held flares or illumination grenades can be used for this purpose.

## 21. Special Considerations

a. The Claymore (M18A1) antipersonnel mine has proved to be a highly effective ambush weapon in Vietnam.

b. "Stay behind" ambushes can be very successful,

since the VC normally follow a unit when it leaves an operational area. Time permitting, these ambush patrols should be prepared to remain in the area for several days and use deception tactics to conceal their presence.

## SECTION VI. AIRMOBILE OPERATIONS

### 22. General

a. A capability to execute airmobile operations effectively is one of the major tactical advantages possessed by FWMAF and RVNAF forces. By use of helicopters, well supported by artillery and fighters, commanders are able to achieve surprise shock action, to move sizeable forces quickly over obstacles or long distances, and to mass forces or reinforce a position quickly with fresh troops ready for combat. Though precise and detailed planning is absolutely necessary for an airmobile operation, its success depends ultimately on quick reaction and aggressive leadership at every echelon of command. There are four types of airmobile operations normally conducted in South Vietnam. They are:

- (1) Airmobile assault.
- (2) Eagle flights.
- (3) Combat reconnaissance.
- (4) Reinforcement.

### 23. Planning Considerations

a. The complex nature of airmobile operations in

RVN dictates that planning for the airmobile maneuver be accomplished in considerable detail. Participants in this planning should include representatives from:

- (1) Maneuver and reserve elements.
- (2) Artillery fire support.
- (3) Close air support.
- (4) Naval gunfire support (if required).
- (5) Aviation units.

b. Timely and detailed weather, terrain and enemy intelligence information is essential to the successful conduct of airmobile operations.

c. Careful consideration should always be given to selection and use of multiple staging areas and landing zones, varied flight patterns, and alternate routes in order to keep losses to a minimum.

d. The range of supporting artillery is a limiting factor in heliborne operations. The advent of the Chinook will greatly alleviate this problem and permit deep penetrations of VC forces by infantry battalions supported by artillery batteries.

e. A well prepared SOP greatly reduces planning, loading and execution times.

#### 24. Airmobile Assault

##### a. General

An airmobile assault is characterized by pre-planned landing zones (LZ), a specific objective or series of objectives to be taken, a reserve element and the coordinated use of fire support elements (discussed later in chapter 4). The airmobile assault force is determined by the assigned mission.

b. Organization. An airmobile operation normally consists of the following elements:

(1) A command and control (C&C) element consisting of the aviation commander, the assault force commander, an air liaison officer and when possible the artillery commander, responsible for the command, control and coordination of the operation. This element will utilize the C&C aircraft with its special radio equipment, and during the operation will provide guidance for the location and selection of appropriate targets.

(2) Sufficient troop carriers (slicks) to lift the desired number of first phase assault forces. Sufficient medium helicopters to move artillery if the operational area is beyond supporting artillery range. Additional forces will normally be ferried into the combat area subsequently. See helicopters in figures 39 thru 44.

(3) An escort element composed of fighters and armed helicopters which provide reconnaissance and have the mission of protecting the flight of slicks into the LZ. They also provide protection by fire for the entire force. As the enemy antiaircraft capability increases the use of fighter escorts must also be increased for flak suppression.

(4) An airmobile assault division is augmented by USAF personnel who serve as Air Liaison/Forward Air Controllers to provide quick response air strikes



Figure 39. UH-1B (Armed)



Figure 40A. UH-1B "Iroquois"



Figure 40B. U



Figure 41. CH-37



Figure 42. CH-34 "Choctaw"



Figure 43. CH-47 "Chinook"



Figure 44. CH-54 "Flying Crane"

(4) Medical evacuation helicopters equipped and manned for the sole purpose of evacuating friendly casualties. This capability is obtained either from the assaulting unit's own resources or from higher headquarters.

(5) A maintenance aircraft crew to provide on-the-spot repairs for disabled aircraft. It is normally backed up by an H-37 evacuation aircraft at the staging area, which can also assist the MEDEVAC helicopter in the removal of casualties and downed crews.

(6) A fire support element, generally "on call", which is composed of an O-1F aircraft with radio relay capability, and a forward observer or forward air controller (FAC).

(7) Additional ground based fire support and combat maneuver elements if they are available in the area.

(8) Radio communications equipment for operating the type communication network illustrated in figure 39.

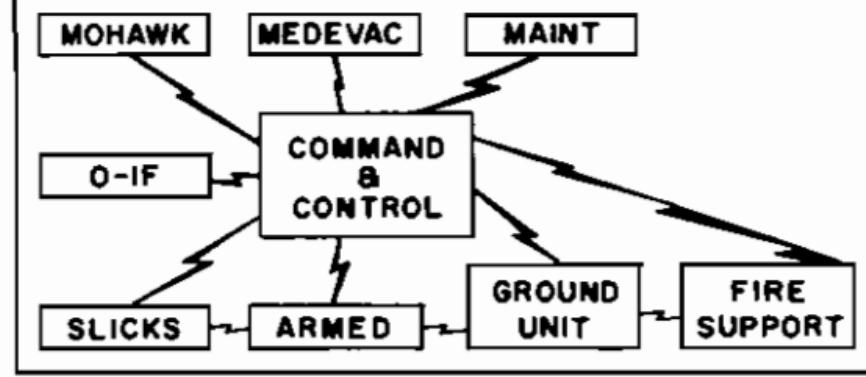


Figure 39. Type Radio Net for Airmobile Assault Force

c. Conduct of an Airmobile Assault.

(1) The airmobile assault begins with preparation of the landing zone by close air support and/or artillery fires. The armed helicopters arrive at the LZ just prior to termination of the preparation to assist the forward air controller (FAC) in evaluating the results and to help in determining whether additional strikes are needed. The assaulting infantry are loaded at staging fields or picked up in the battle area from a pickup zone (PZ). The troop lift helicopters are vectored to the LZ on command from the C&C aircraft or the armed helicopter leader. The armed helicopters coordinate strikes on the LZ with the FAC prior to the slicks' reaching the LZ. After the slicks receive the command to proceed to the LZ, the armed ships relay the following information to them:

- (a) Final approach heading.
- (b) Touchdown point (may be marked with smoke).
- (c) Heading and route for departure from the LZ.
- (d) Brief summary of condition of LZ, including enemy and friendly troop situations.
- (e) Where suppressive and supporting fires will be delivered.
- (f) Direction of attack or movement from LZ.
- (2) The direction of attack is monitored by crew

chiefs in the slicks; they indicate the direction to the assault force by hand and arm signals just prior to touchdown.

(3) As the lead elements of the airmobile force approach the LZ, armed helicopters provide suppressive fire while the slicks are landing, unloading and departing the LZ. Artillery fire and air strikes may also be made simultaneously and in close proximity to each other. Flak suppression strikes may be required during the landing.

(4) The desired timing includes simultaneous touchdown and takeoff of all slicks with less than ten seconds on the LZ.

(5) As the first lift of helicopters departs from the LZ, armed helicopters, tactical air, or artillery can be used to support the ground force.

(6) The armed helicopters are also used for reconnaissance and surveillance.

(7) Troops initially employed in securing an LZ are highly vulnerable to VC attack, especially when the first troop lift is small because of a restricted LZ. Whether the first airmobile force is designated to provide security for the LZ or to assault an objective from the LZ, it should:

(a) Send out patrols to search the perimeter.

(b) Consolidate the remainder of the airmobile force into a strong point located off the LZ or objective.

(8) The reserve force commander must keep abreast of the operation so that his counterattack plans address the actual situation to which he may be committed.

(9) At the termination of the mission, troop extraction is completed in the following sequence:

(a) Ground unit secures the area.

(b) Armed ships assume security of the LZ as the ground unit moves into pickup formation.

(c) Slicks deploy to pickup formation prior to reaching the LZ.

(10) Fire support for the extraction is furnished by tactical aircraft, artillery and armed helicopters.

(11) Ambush of US airmobile forces by the VC is a constant threat. The enemy's capability to ambush possible LZs in force can be decreased by:

(a) Limiting and varying reconnaissance of LZs.

(b) Conducting tactical air strikes on the LZ followed by an artillery preparation.

(c) Utilizing alternate LZs.

(d) Deceiving the VC as to the actual location of the LZ by establishing a decoy LZ.

(e) Avoiding the most likely LZ, or one which was used previously.

(f) Committing a maximum number of troops in the LZ at one time.

(g) Using random stretches of available roads as LZs.

(12) In addition to the points mentioned, the following considerations may also influence the outcome of the operation:

(a) Airmobile operations in high canopy jungle are limited to troops trained in rappelling.

(b) "On ground" time for the helicopter can be appreciably reduced by removing the seats or strapping them up in the helicopter. This enables the troops to embark and debark quickly.

(c) Troop and cargo lift capability is determined not only by type helicopter and the amount of fuel on board, but also by meteorological conditions and terrain. For example, in the high plateau transport helicopters can carry about 60% of the load possible in the lowlands.

## 26. Eagle Flight

### a. General.

(1) As its name implies, the eagle flight is a force capable of searching out and pursuing its prey, attacking it quickly and violently, and withdrawing to seek other prey.

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Eagle flight operations were especially developed for flat, lowlying terrain like that of the Delta where lack of roads, great expanses of inundated land, vast networks of tree-lined rivers and canals and widely dispersed population make fighting the VC on foot a most difficult task.

(2) The eagle flight forces are usually small -- approximately company size. Their employment is characterized by lack of pre-planned landing zones and acceptance of limited fire support. The effectiveness of an eagle flight unit depends upon its ability to react and maneuver rapidly in any combat situation and to harass and disrupt the activities of VC units.

b. Organization. An eagle flight requires essentially the same elements as an airmobile operation except that the eagle flight normally has sufficient slicks for lifting the entire assault force in one lift.

### c. Conduct of an Eagle Flight.

(1) The assault force commander orders the eagle flight forces airborne when armed reconnaissance helicopters make or anticipate making enemy contact, or when a need arises for an immediate search of a limited area. The eagle flight force may also be ordered airborne and instructed to orbit at a specific location until such time as it is committed. Once committed, movement into the LZ follows the procedures outlined above for the airmobile assault.

(2) Prior to landing at a designated LZ, the unit commander is briefed in detail by the commander of the armed ship element on the direction the attack should take, what he will encounter to include the location of VC positions

or terrain features which might pose a threat, and where and how contact was initially made by the armed ships. Fire support for the assault is provided by the armed ships until tactical air support or artillery becomes available. The armed ships come under the operational control of the unit commander after the slicks have cleared the LZ.

(3) When the mission is completed, the eagle force is picked up by the slicks and committed to another area or returned to the staging area. The technique of deploying, striking and then redeploying to strike again was successfully used in November 1964 as a reaction to a VC attack on a friendly hamlet in IV Corps. The VC had positioned an estimated company south of the hamlet to ambush the expected reaction force. While reconnoitering an appropriate LZ, the commander of the operation spotted the VC ambush site, immediately called for aerial suppressive fire, and landed his force near the ambush. The VC ambush unit was caught completely off guard by this maneuver and attempted a rapid withdrawal. After a short fire fight, the eagle flight force reloaded on the troop carriers, landed at another position and ambushed the withdrawing VC force. As a result of this mobile and aggressive eagle reaction force, the VC sustained 12 killed and an unknown number wounded.

## 27. Combat Reconnaissance

a. Combat reconnaissance operations using small, highly trained units are effective against squad or smaller size units in VC areas, and are capable of collecting accurate and up-to-date information on larger VC forces. It should be standard practice to use combat reconnaissance

before committing large forces so that when committed, they have increased chances of engaging effectively. The operation is conducted without pre-planned landing zones, without a multiple landing capability, and without dependence upon aerial suppressive fires. In addition to the military value of such operations, they demonstrate to the guerrilla and the VC sympathizer that they have no sanctuary. An airmobile combat reconnaissance operation may be compared to a patrol with the mission of reconnoitering or of capturing or destroying enemy personnel and equipment. The assault force, normally composed of 20 to 24 men armed with lightweight automatic weapons, is not capable of conducting sustained operations. It should complete its task on the ground in less than 15 minutes.

b. Organization. Organization of the combat reconnaissance unit is as follows:

(1) Armed helicopters for selection and reconnaissance of LZs.

(2) Slicks for transportation.

(3) Evacuation aircraft for prisoners.

c. Conduct of the Operation.

(1) Based on the need to gather information, the combat reconnaissance unit is airlifted into the LZ after the armed ships verify that there is no larger VC force in the area. The unit rapidly searches a limited area, questions the inhabitants, and apprehends any suspects. After spending a reasonably short time in the area, the unit is airlifted into another area. If contact is established with a unit larger than it can handle it is reinforced

or withdrawn. However the contact is followed up by the necessary force to destroy the VC.

(2) This type of operation was effectively employed in I Corps in September 1965 when, after landing in the initial area, contact was established with three VC. Two of the VC were killed and one captured. Eight houses were searched and several pounds of documents found. After pick up, a quick scan of the documents coupled with interrogation of the prisoner indicated that the area was worth a second and more thorough search. The unit was airlifted into a new area on the opposite side of the village. Again the unit made contact, killing one more VC, wounding one and capturing seven. The documents carried on the dead VC revealed the intelligence network and names of infiltrators within the district headquarters. The unit and its prisoners were again picked up and returned to the staging area. The total time that had elapsed from takeoff until return was one hour and ten minutes. This example points out how a small force can be used effectively to achieve major results in information gathering.

## 28. Reinforcement

The reinforcement mission illustrates how the fundamental procedures for an airmobile assault and an eagle flight mission can provide the basis for an effective strike force operation. An example of the flexible reinforcement capability of airmobile units was demonstrated in Bac Lieu Province in March 1965 during a search and destroy mission. The operation was initiated by a coordinated assault of ground and airmobile units. While the operation was in progress, a Mohawk reconnaissance aircraft reported unusual movement in an area 40 kilometers from the battle area. The commander immediately dispatched an armed helicopter platoon to investigate

the movement and ordered an eagle flight force airborne in event contact was established. Upon entering the new area, the armed helicopter platoon encountered two platoons from a VC main force unit crossing an open field. While taking the VC unit under fire, the armed platoon encountered additional armed personnel in and around a small hamlet 1500 meters away. The armed platoon was instructed to determine the flanks of the unit, and find and secure a LZ. The commander employed the eagle flight force in the LZ near the larger body of VC troops, and it quickly made heavy contact. In anticipation of this, the commander had ordered the original units extracted from the first area and the selection of several landing zones located to isolate the VC units. Fire support aircraft were obtained and 12 lifts were employed for the envelopment of the two VC battalions. The VC suffered 238 killed (body count) and 250 wounded. In this example, the original operation was initiated by conventional ground and airmobile forces. A lucrative target was developed by an eagle flight force, and the target was effectively destroyed by multiple, reinforcing airmobile assaults.

## SECTION VII. SEARCH AND DESTROY OPERATIONS

### 29. General

a. The primary objectives of search and destroy operations are to find, fix and destroy the enemy; to destroy or seize his equipment, foodstuffs, medical supplies and base areas; and, whenever possible, destroy his political and military infrastructure (his local organization at province, district, village and hamlet level). An additional

objective is to keep the enemy on the move and dispersed to prevent him from planning, assembling and executing operations on his own initiative.

b. Most operations are conducted without detailed prior information on the VC, and the commander must necessarily produce his own intelligence as he goes. It is abundantly clear that sweep operations, that is, moving quickly through an area without diligent search, are not productive. The VC are trained to sidestep such operations, maintain surveillance over them by the use of local guerrillas, and wait for an opportunity to strike and destroy detached small elements or larger forces whose guard is down. Thus, the success of offensive operations designed to destroy VC forces depends upon finding the enemy and engaging him with superior forces. It follows that information must be gathered from every conceivable source. There are three main sources, and all three should be used simultaneously and continuously whenever possible:

(1) Combat reconnaissance. Aggressive, continuous combat reconnaissance is essential in all operations. Saturation patrolling by platoon size or even smaller units, either on foot or delivered by helicopter, is a prime source of information. Platoon size heliborne reconnaissance elements should reconnoiter all populated areas and likely VC concentrations points within a wide radius around operating units.

(2) Locally available information. The best source of accurate information exists at province, district, village, RF, and PF levels. Close liaison and frequent visits to appropriate officials and commanders can result in much accurate and useful information.

(3) Aerial surveillance and target acquisition -- aerial photography, infrared detection, side-looking radar (SLAR) and continuous visual observation have all proven their effectiveness in Vietnam.

c. There are three types of search and destroy operations:

(1) Operations to destroy a VC/NVA base area.

(2) Operations to destroy VC or NVA main force units.

(3) Operations to destroy VC local and guerrilla forces and the VC military/political structure in a given area -- district or province.

### 30. Operations to Destroy VC/NVA Base Areas

a. Offensive operations against VC base areas contribute to the defeat of the enemy by causing him to move and thus to exhaust time and supplies. Such operations should uncover and destroy the logistics base itself, including shelter, training areas, and command posts.

b. Since installations in VC base areas are invariably completely camouflaged and protected by security troops and booby traps, operations against these targets must involve a thorough combing of the base area, organized by the establishment of a series of search zones. Forces assigned to zones must be given full opportunity to cover each zone thoroughly and ample time and means to destroy what they find.

c. Operations against VC base areas should be repetitive, based on a carefully designed campaign of

sustained action which will, ultimately, dominate the bases and render them useless.

d. Limited operations against VC base areas are also effective in keeping the enemy off balance, denying him free utilization of safe areas, and forcing him either to move frequently or to withhold forces for the defense of base complexes. Long range artillery, naval gunfire, fighter bombers, strategic bombers and land and amphibious raids will hamper his operations, reduce his forces, destroy his morale and materially detract from his ability to prosecute the war effectively.

### 31. Operations to Destroy VC or NVA Main Force Units

a. The success of offensive operations designed to destroy VC/NVA main forces depends upon finding the enemy and engaging him with superior forces. In those few instances when reliable information becomes available regarding the size or location of such a force, the opportunity should be exploited immediately and aggressively in coordination with appropriate FWMAF and Vietnamese commanders.

h. It must be emphasized, however, that those instances in which firm intelligence is available will be very rare. Therefore, acquisition of detailed information in the early stages of operations is essential. In almost every case this will include a requirement for aggressive ground reconnaissance. Specially trained small reconnaissance units, such as the Delta Teams discussed on page 58, should be established. In most instances these reconnaissance units should include one or two Vietnamese soldiers.

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c. Schemes of maneuver must be inherently flexible to enable immediate response to any opportunity which promises defeat and destruction of VC. Rigidly pre-planned schemes of maneuver, with successive objectives, by a force moving in one direction, will nearly always fail to fix the enemy unless the "fix" is at a place and time chosen by the VC.

d. The first step in destroying VC or NVA main force units is to entrap or encircle the enemy force. It is not sufficient, in most cases, to use only an attacking and a blocking force -- more is required. The VC have, on many occasions, slipped between these two forces, escaping relatively unscathed. Therefore, the VC forces' most likely routes of withdrawal must be covered by ground combat elements, and the less likely routes of withdrawal by light reconnaissance elements on the ground, placed and extracted by helicopters, if available, in order to exploit time and space advantages.

e. Once contact is made commanders must be prepared to rapidly adjust plans to enemy movements, and to alter schemes of maneuver to fix and destroy the enemy. Action must be quick, aggressive and responsive to the movement of the VC. In this situation mission-type orders should be issued to combat units; they must move with great speed around, behind and on the flanks of any located VC force. This will require bold and skillful commanders at every echelon. Speed and deception must characterize tactical maneuver -- and all this must be done with meticulous attention to continuous provision of air, artillery and where feasible, naval gunfire support.

32. Operations to destroy local and guerrilla forces and the VC/military structure.

a. Normally, operations designed to destroy local and guerrilla forces and the VC military/political structure are classified as clearing operations or securing operations designed to bring specified areas permanently under GVN control. In such cases the clearing forces are to be followed by police, Regional and Popular Forces which, together with the cadre, are intended to eliminate the entire VC organization and to substitute therefor district, village and hamlet authorities who are loyal and responsive to the government.

b. However, because the VC objective is to take over the government at every level through the gradual development of powerful local guerrilla and political organizations and because these local organizations provide intelligence, tactical support and resources to main force units, it is sometimes necessary to attack this local structure even if there is no capability or intention to follow up with pacification measures (clearing and securing).

c. Therefore, search and destroy operations may be undertaken when pacification is not possible in accordance with techniques quite similar to clearing, which are treated separately in this handbook.

d. US and Free World Forces of approximately brigade size may often be deployed into a province, or even a district, for sustained operations over 2, 3 or 4 week periods designed to destroy local and guerrilla forces and the political and military infrastructure of the VC. The techniques

which are most effective in this connection are as follows:

(1) The tactical commander establishes a base from which he can launch quick reaction forces by helicopter, by vehicle and sometimes on foot.

(2) The commander his staff and his subordinate commanders establish contact with the local province, district, hamlet and village officials in order to obtain from them the most recent intelligence on VC activities and forces in the area.

(3) Because the intelligence gathered from these sources will usually be incomplete, it is necessary also to conduct extensive combat reconnaissance patrols. Battalions will be assigned areas within which companies, platoons and squads will conduct extensive foot, motor and heliborne patrols into areas identified by local officials as VC concentrations or areas of habitual VC activity.

(4) US platoons and squads or sometimes companies may accompany Regional Forces and Popular Forces on local operations to stiffen them and to provide the necessary communications for artillery and air support.

(5) In conjunction with local officials or Regional and Popular Forces, hamlets should be surrounded and searched and VC officials, identified through prior intelligence or interrogation, should be apprehended and turned over to Vietnamese authorities.

(6) By saturation patrolling by small units over a long period of time, a number of small contacts may be expected. Intelligence acquired through these contacts

should be exploited immediately and after a week or two, the intelligence picture in the area should become reasonably clear and a number of prisoners or ralliers should be in hand.

(7) Whenever a contact is made, a quick reaction by a large force should ensure success and low casualties by progressively destroying the VC organization in the area.

(8) After 3 or 4 weeks of such operations the following results should be ensured:

(a) RF and PF aggressiveness should be increased.

(b) Local intelligence should be forthcoming in ever greater quantity and quality.

(c) The number of small VC elements at hamlet and village levels should have been destroyed and the VC forced generally on the defensive.

(d) Opportunities to recruit additional RF/PF should increase.

(e) Opportunities for civic action and psychological operations should multiply.

(f) GVN control should be strengthened through domination of the area at the lowest level.

e. In the type of action described above most contacts will be with VC squads and platoons and only rarely with companies or battalions. Nonetheless,

this type of operation strikes at the heart of the VC organization and at his capability to conduct or support successfully his major operations. Troops should expect a large number of small successes. The cumulative effect of this type operation will be as important or even more important than engagements with a large VC force.

## SECTION VIII. CLEARING AND SECURING OPERATIONS

### 33. Clearing Operations

a. Clearing operations are offensive combat operations conducted in a well defined zone and directed at destroying or permanently driving VC military forces out of a clearly designated area in preparation for securing operations -- see paragraph 34 below. US and other FWMAF will conduct clearing operations in and around their base areas and communication complexes, or in other carefully selected areas.

b. By their sustained nature, clearing operations are designed to make maximum use of local intelligence and combined operations with RF and PF. Only by remaining in an area for a protracted period can a closer relationship with the populace be developed. This, in turn, engenders confidence. When the local people no longer live in fear that the VC will return, they will inform on them because it is in the interest of their own security and welfare to do so. An area is thus cleared and ready for securing.

### 34. Securing Operations

a. Securing operations which always follow clearing

operations are designed to provide permanent security for hamlets, villages and districts which already have been cleared and which have been selected for pacification.

b. The RF and PF have primary responsibility for securing and are expected to relieve ARVN or FWMA forces that have cleared an area to enable them to move on to clear additional areas, thus expanding the pacified zone.

c. While securing forces must conduct saturation patrolling, they are not expected to cope with large VC units which should, in fact, no longer be within striking distance. Ultimately many of the securing forces will be replaced by National Police.

## SECTION IX

### OPERATIONS IN THE CENTRAL HIGHLANDS AREA

#### 35. General

The Central Highlands area constitutes almost 50 percent of the South Vietnam land mass. It is a rugged, mountainous area, with maximum elevation ranging from 4500 to 7000 feet in the vicinity of Dalat and from 3000 to 8000 feet in the area west of Quang Ngai. The area slopes steeply down to the coastal plain on the east and more gradually on the western plateau, resulting in a strong contrast between the short, swift, eastward-flowing streams with their steep-walled, narrow valleys,

and the more sluggish westward-flowing streams with their broad flat valleys. All streams are swollen and difficult to ford during the rainy season. Operations in this area differ greatly from those in the Delta and coastal plains because of the differences in terrain, weather and population. See relief map of Vietnam figure 45.

#### 36. Characteristics of the Area

a. People: The hills and mountains are inhabited by Montagnards who are very primitive and, in many cases, aborigines (figure 46). "Montagnard" is a French word meaning "Mountaineer". Generally speaking these people are taller than the lowlanders and have a heavier muscle and bone structure, a darker complexion and more prominent mongoloid features. Clothing varies from tribe to tribe. Usually the women wear long skirts of dark material and may wear a short jacket or be bare breasted; the men wear loin cloths. They live in stilt houses. Their loyalty is given first to the family, and second to the tribe. Village life is completely communal. Word of mouth is their only means of communication as their literacy rate is extremely low.

b. Terrain: Steep slopes, sharp crests and narrow valleys characterize the mountainous areas. Numerous razorback ridges run in all directions and it is virtually impossible to follow them in any one direction for more than a few hundred yards. The forested areas of the foot hills up to 3000 feet have an unbroken continuity of tall trees that form a dense, closed canopy over the ground. The undergrowth is very thick, comprising an almost impenetrable mass of smaller trees less than 10 feet high, intermingled with thorny shrubs and vines. Most

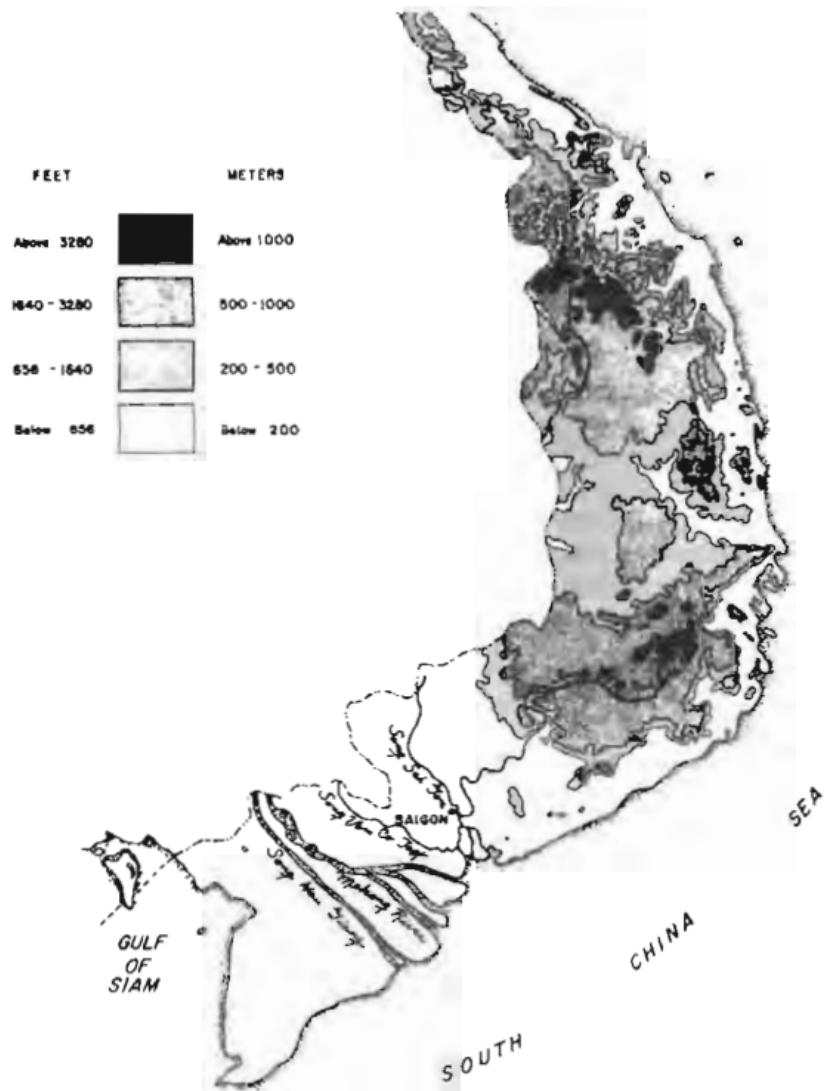


Figure 45. Relief Map of Vietnam



Figure 46

streams are bordered by high, steep rocky banks and are generally swift with rapids and shallows common. Fording is possible in many places except during the flash floods which occur during the rainy season.

c. Weather: In the highlands the southwest monsoon season lasts from May to October. During this period low clouds and ground fog limit observation and seriously restrict aerial activity. Cloud ceilings are less than 3000 feet about 80% of the time. Average monthly rainfall is approximately 13 inches. The average high temperature is 88 degrees with an average low of 55 degrees.

d. Movement.

(1) The steep terrain and dense jungles reduce foot mobility. Rate of march is usually from one half to two kilometers per hour with frequent rest stops. Experience shows that there is a tendency to overestimate the rate of advance of columns. The amount of rations and equipment carried by the individual soldier must be carefully considered to prolong his effectiveness.

(2) Wheeled and track vehicles will be restricted to the existing roads and trails. Bridges in this region are not capable of supporting heavy loads.

(3) The limited number of suitable landing zones requires careful and detailed reconnaissance in order to conduct heliborne operations. Open areas are sometimes covered with stakes and tree stumps, which may prohibit helicopter landings. The high altitude and small landing zones result in a reduction of helicopter lift capability.

e. Intelligence: Accurate, detailed, and timely information about the VC is difficult to obtain because of the sparse population, lack of communication facilities, terrain, and distances involved. Information from local inhabitants is frequently unreliable and misleading because the natives do not accurately determine time or dates and lack familiarity in dealing with numbers. Small, lightly equipped reconnaissance teams capable of staying in the area for long periods of time are particularly effective. Such teams can observe enemy activity and relay information to overflying aircraft on a prearranged schedule.

### 37. Planning Considerations

a. Combat Support.

(1) Artillery: Limited road nets or complete absence of roads restricts movement of artillery. Suitable positions are difficult to find, and sometimes clearing and leveling is necessary prior to positioning artillery pieces by helicopter.

(2) Air support: Dense jungle, low clouds and ground fog restrict air support. The locations of friendly forward elements are frequently difficult to determine from the air, limiting the delivery of close supporting fires. Units should plan the use of pyrotechnics, panels and other devices to mark their forward positions.

## SECTION X

## OPERATIONS IN SWAMPY AND INUNDATED AREAS

## 38. General

Operations in swampy and inundated areas in Vietnam are generally associated with the Mekong Delta -- that region of Vietnam which lies south and west of the city of Saigon laced with rivers, streams, and canals. However, some of these same conditions exist along the northern coastal plain in small delta areas. Rice paddies comprise most of the Delta. Two other types of areas within the Delta, the Plain of Reeds and the Mangrove Swamps, are treated separately below.

## 39. Characteristics of the Delta Area

## a. Rice Paddy Areas.

(1) Area traits. The rice paddy land of the Delta is the most heavily populated rural area in RVN; dwellings are found along nearly every waterway. Streams, canals and rivers interlace this area; trees and other vegetation along the waterways sometimes extend 300 meters on each side. The land between the waterways is covered by rice paddies and during the rainy season these paddies are covered with water to a depth of one foot or more. In the dry season these same rice paddies dry up and crack open.

## (2) Movement capabilities.

## (a) Routes. There is an extensive network

of rivers and canals useable throughout the year, and generally capable of supporting craft as large as landing craft, Mechanized (LCM). River craft are confined to the major canals and to the rivers. Overhead bridge clearance and depth of water at high and low tide must be considered in planning use of river boats. Assault boats can operate freely on minor canals only during high tide. Native sampans operate at all times.

(b) Cross-country. Troops can maneuver in the paddies on foot the year-round. Foot movement during the dry season averages three to four kilometers per hour during the day and one and one-half kilometers per hour at night. During the wet season foot movement may be slowed by difficulties in crossing canals; a combination of deep water and steep muddy banks may result in insufficient traction. Consideration of the tide is necessary, even far inland, as high tide favors boat movement, while low tide favors wading across canals in most search operations. Several large-scale operations have failed or have been aborted because the effects of the tide were not considered.

(c) Helicopters. Most rice paddies in both the wet and dry season are potential landing or loading zones.

(d) Airborne. Airborne forces can be employed year-round with few limitations on the size of the force dropped. During the wet season the water depth of the rice paddies should be considered when selecting drop zones. If the situation requires it, drop zones can be successfully selected immediately prior to the drop.

(e) Dogs. Dogs may be used with good effect during the dry season particularly during searches and night operations.

(3) VC practices.

(a) VC greatly enhance their mobility through the use of sampans.

(b) Because of the danger of being boxed in between tree lines during daylight, the VC prefer to withdraw to successive fortified positions when friendly forces attack. When necessary they will fight from one of the many well constructed defensive positions they have built throughout the area.

(c) Barriers and mines are employed across canals and streams to protect VC positions.

(d) Mines and foot traps are used extensively throughout the area.

(e) The VC use guerrillas extensively as screening and diversionary forces. They customarily employ a rear guard to delay pursuing forces.

b. Plain of Reeds:

(1) Area traits. The sparse population is scattered throughout the small hamlets at canal or stream junctions and along the banks of these waterways. During the rainy season when the entire area is inundated, the people live in elevated houses or in sampans. Even during the dry season, the area is continuously covered with water varying from

ankle to shoulder depth and blanketed by reeds and grass one-half to four and a half meters high. There are trees scattered along the small number of canals and streams in the area. During the dry season many parts of the area resemble the midwest prairies from the air. In the wet season it looks like a sea or large lake.

(2) Movement capabilities.

(a) Routes. Only two major canals and a single road cross the area. Inhabitants normally travel by boat and sampan, often directly across flooded fields.

(b) Cross-country. The average rate of travel cross-country by foot in the dry season is 1.5 kilometers per hour. During the wet season foot travel seldom exceeds one kilometer per hour and in many places is not possible at all. The sampan provides the fastest and best means of travel. Swimmer support boats (SSB), wide shallow-draft boats, can be used but normally must be poled cross-country because the reeds tangle in the propeller. (See paragraph 41, Small Boat Operations). Armored personnel carriers are most valuable in this area, although frequent stops are necessary to cut the reeds and grass from the tracks and drive sprockets. River force craft are limited to larger streams and canals. They are sometimes used to carry troops to the general area of operations but can seldom be utilized to support an assault operation.

(c) Helicopters. Helicopter landing zones in the Plain of Reeds are limited. In the dry season canal and river banks may be used for landings, but in the rainy season troops must be loaded and unloaded from hovering helicopters. Care must be taken not to offload troops in water

reaching over their heads. Small boats can be lashed to the skids of helicopters and used to disembark troops.

(d) Airborne. Airborne troops can be employed effectively throughout most of the area depending upon the depth of the water and the season of the year.

(3) Fire Support. Moving artillery into position to support operations requires boat or helicopter transportation and usually compromises security. Heavy mortars and artillery which can be delivered by helicopter still possess the disadvantage of limited range for the usually large area operations conducted in the Plain of Reeds. Naval guns can support operations within range of the Mekong river. Tactical air support and armed helicopter support are most useful. Assault boats or sampans may be used to carry heavier crew served weapons and ammunition.

(4) VC practices.

(a) Mobile VC units live in and fight from small sampans during the rainy season.

(b) VC use the area for training bases, manufacturing sites, and rest areas, most of which are located near the Cambodian border.

(c) Foot troops escape and evade by going under water and breathing through reeds or by hiding in high grass.

(d) VC use barriers and mines to protect canals, streams and rivers leading to their "secret bases."

c. Mangrove Swamps.

(1) Area traits. Population is very sparse and is concentrated along the shore line or at river and stream junctions. Most houses are built on stilts because of the wide variations of the tides. Few people actually live in the swamps. Trees, vines, exposed roots and dense undergrowth are marks of the Mangrove Swamps. Swamp depths, depending on the tide, vary from one meter of mud to one meter of mud covered by two meters of water. Tides cause river currents to reverse direction as the tide changes.

(2) Movement capabilities.

(a) Routes. There are no roads in the Mangrove Swamps. Boats traveling into the area during high tide can be stranded at low tide and may have difficulty reaching shore. Sampans can enter the area from the sea only during high tide. Although these conditions hamper tactical troop landings, several successful landings have been made. LCMs and LCVPs can get close to shore only by following river channels.

(b) Cross-country. Foot movement is very slow. The average rate of foot movement is one kilometer per hour, and may be only a few hundred meters per hour. Armored personnel carriers can operate in only a few parts of the Mangrove Swamps, generally around the edges. Sampans and SSBs are limited to the few streams and are likely to be stranded at low tide.

(c) Helicopters and airborne. Helicopter and airborne forces can be employed in mass only on the fringe

areas of Mangrove Swamps.

(d) Dogs. Dogs are partially effective on stream banks. They can also be used in the swamps during low tide, but they tire easily. During high tide the dogs must be carried or placed in boats.

(3) Fire support. The planning considerations for the use of artillery, mortar and air support are similar to those necessary for operations in the Plain of Reeds. Naval gunfire can be used. Consideration should be given to the use of assault boats or sampans to carry heavier crew-served weapons and ammunition.

(4) VC practices.

(a) VC dominate the Mangrove Swamps and occupy most of the villages.

(b) This area (like the Plain of Reeds) contains many secret bases for training, manufacturing and storage of war material, hospitals, and rest areas.

(c) Escape and evasion is normally to the sea by sampan or by dispersion into the swamps.

(d) Mines, foot traps, and mantraps are used extensively throughout the area. Almost every path and route into the swamps is mined and heavily trapped.

40. Planning Considerations

a. Throughout most of the Delta the terrain is such that small forces are employed to develop the situation,

with mobile reserves for commitment as required.

b. Most operations are aimed at encircling a suspected VC force in a given general area. Often the lack of definite intelligence leads to the selection of terrain objectives rather than VC locations as control measures. All forces must be quick to follow the VC, to keep pressure on him if possible, in order to rapidly develop the situation and fix him in a killing zone. Secondary forces are assigned blocking positions on both sides of wooded canal lines leading into the suspected VC area. These forces must be strong enough to withstand a VC breakout attempt, particularly at night. Maneuver elements usually advance along wooded canal lines, which offer very limited frontages (generally limited to platoon size on each bank of the canal). For this reason, it is often difficult to bring large forces to bear on VC positions on both sides of the canals. The use of screening smokes laid by aircraft or artillery may permit flanking movements through the open rice fields.

41. Small Boat Operations

a. General. In the Delta region, small boats can provide a high degree of mobility for a military force. They are used to perform military tasks in much the same manner as light trucks.

b. Description of small boats.

(1) Dong Nai Boats, also called Swimmer Support Boats (SSB). These are wide, shallow-draft styrofoam boats weighing 500 pounds. Their styrofoam construction makes them buoyant enough to prevent sinking even if swamped (figure 47).



Figure 47. Swimmer Support Boat (SSB)



Figure 48. Plastic Assault Boat (PAB)

(2) Plastic Assault Boats (PAB). The assault boat M3 weighs 300 pounds. It is narrower, deeper, and also has a tougher outer surface than the Dong Nai boat and hence is more suitable for being run up onto river or canal banks during landing operations (Figure 48).

(3) Modified Plastic Assault Boats. These are PABs to which styrofoam sections have been bonded to provide greater buoyancy. Like the Dong Nai boats, modified PABs are unsinkable. They weigh about 475 pounds.

#### c. Planning Considerations

(1) General. Boat operations are basically the same as other operations which use special means to increase the speed of movement. Backward planning should be used, and the general scheme of maneuver should not depend solely on the available water routes. Boats are intended to increase, not restrict the choice of routes. Small boats are not normally used as fighting vehicles. Troops usually debark and fight on foot; boat crews and security forces remain with the boats.

#### (2) Advantages.

(a) Speed. Normally, 40-horsepower outboard motors are used which can propel combat loaded boats at speeds up to 27-30 kilometers per hour (17-20 knots). A minimum depth of 26 inches is required for powered operation, but with the propeller raised, boats propelled by paddles or poles can operate in as little as 10 inches of water.

(b) Weight carrying capacity. The SSB and PAB

are both capable of carrying 10-12 troops. Units moving in boats can carry far more weapons, ammunition and equipment than foot elements, so commanders must insure that means will be available to move the equipment after debarkation.

(3) Limitations.

(a) Restricted movement.

(b) Lack of concealment and cover. Waterways lack cover and concealment, especially if they are wide. Boats can be seen and fired upon easily in daylight. This disadvantage can be reduced by moving at night and traveling close to the stream banks where shadow and overhead branches aid concealment.

(3) Noise. The noise of motors eliminates the chance for stealth and surprise.

d. Special Consideration.

(1) Intelligence.

(a) Terrain intelligence takes on special importance for units conducting small boat operations. The pattern of canals and streams requires very careful analysis.

(b) Visual reports concerning obstacles, possible ambush sites, water current speed and direction, extent of water plant growth, amount of tidal effect and any other factors which influence boat operations, should supplement maps and photo information. Accurate tide information is absolutely essential in the earlier planning stages.

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(2) Training. Small boat operations are not difficult, but their success depends on mastery of basic techniques and on mutual confidence between boat crews and the transported infantry elements. Team training is essential, especially for troops unaccustomed to boat movement. For example, troops must unhook web equipment while over deep water so they can shed their equipment if they fall overboard.

(3) Supply and maintenance. Infantry units supported by small boat elements must plan to assist the boat units in supply and maintenance matters, including gasoline supply.

(4) River Assault Groups. The VNN River Assault Group (RAG) has a capability for providing fire support and troop lift for ground forces, using Monitors, Commandaments, River Patrol Craft, LCM, LCVP and related boats. See figure 49 for tabulated data. When RAG forces are employed, they should be preceded by minesweeping LCVP's.

BOAT TYPE	COMMENTS
Landing Craft, Vehicles, Personnel (LCVP) (Figure 50)	Capacity 10-12 troops. Speed 10 mph. RAG LCVP's are armed with one 20mm and three cal .30 MG and are used primarily for fighting craft rather than transports.
Landing Craft, Mechanized (LCM) (Figure 51)	Capacity 90 troops. Speed 10-12 mph. Max. draft 5' and bridge clearance 12'. LCM's are armed with three 20mm and two cal .50 MG.

<b>COMMANDAMENT</b> (Figure 52)	Used as a mobile command ship. Speed 10-12 mph. The CDT's have one AN/PRC-10, one AN/VRC-34, and two TCS-12 radios and are armed with two 20mm guns.
<b>MONITOR</b> (Figure 53)	Used for gunfire support. Speed 10-12 mph. Armed with one 40mm, two 20mm, one cal .50 MG, and one 81mm mortar.
<b>River Patrol Craft (RPC)</b> (Figure 54)	Capacity 18 troops. Speed 10-12 mph. Mounts two twin cal .50 HMG and two cal .30 LMG. Normally used for river patrol

Figure 49. Data Pertaining to RAG Boats



Figure 50. Landing Craft, Vehicles, Personnel (LCVP)



Figure 51. Landing Craft, Mechanized (LCM)



Figure 52. Commandament



Figure 53. Monitor



Figure 29. River Patrol Craft (RPC)

## SECTION XI. DEFENSIVE CONSIDERATIONS

## 42. General

While continuous emphasis must be placed on offensive operations, establishment of sound defensive positions is essential. Planning and execution of the defense must be flexible and provide for rapid reaction to VC attacks.

## 43. Considerations

a. The best defense is offensive action; a series of outposts and ambush sites should be established in depth at dusk or shortly after dark. During daylight, saturation patrolling as well as outposts should be employed.

b. Defensive positions must provide all around protection with the capability for rapidly massing fires on any location around or within the perimeter.

c. For fixed and semi-fixed installations barbed wire barriers (concertina, single and double apron fence, tanglefoot) should be constructed around the perimeter of the installation and around sensitive locations inside the perimeter. Although a good barrier plan is essential, the internal security cannot depend alone on the physical barriers placed around the installation.

d. Trenches should be dug in a zig-zag pattern between bunkers. Grenade sumps are required in trenches.

e. Bunkers, by the nature of their fixed positions, are most vulnerable to infiltration attack, or attack by direct fire weapons. Bunkers must be located at least 50 meters behind the inner barrier wire to reduce the damage from VC-emplaced claymore mines. All bunkers should have reinforced overhead cover capable of withstanding the effects of mortar fire. They should be camouflaged if possible to increase the problem of identifying them at night.

f. Claymore mines, emplaced inside the barrier wire for command detonation, are most effective against personnel. Improvised flame devices, such as the electrically detonated "fougasse", are also effective.

g. The M79 grenade launcher is effective in covering dead space in final protective fires close to the edge of the defensive perimeter.

h. A well coordinated illumination plan tightly controlled by the commander must be developed in order to prevent indiscriminate use of illumination. Improper illumination may reveal friendly forces and defensive positions to the VC.

i. Locate guard or reserve forces throughout the internal area to combat small unit infiltrations. A plan to utilize reserve forces to prevent or repel VC penetrations of the perimeter must be developed. This important fundamental was learned the hard way by the valiant defenders at Camp Bu Dop in July 1965. The VC attacked with two battalions, succeeding in penetrating the northwest corner of the camp. From this position inside the compound the VC fired into the backs of the defenders and inflicted heavy casualties. This situation could have been prevented if a reserve force had been constituted and committed to repel the VC penetration.

j. Establish multiple means of communication with bunkers and internal security posts.

k. There must be a minimum of movement inside the perimeter after dark. If firing of weapons or explosions of grenades occur inside the perimeter (not from protective bunkers or firing pits) all personnel not in protective positions should "freeze" in a firing position. Anyone running or moving about should be considered enemy. Signals must be used to identify friendly counterattack forces. After firing ceases conduct a sweep inside the perimeter.

l. Disperse key personnel, weapons and equipment in order to avoid excessive losses.

m. The chain of command within all units must be well defined to preclude confusion resulting from casualties.

n. Emergency plans to restore communications and medical aid and to assure uninterrupted defense of the area must be developed and rehearsed.

o. Search civilian workers upon their departure from the installation to prevent removal of arms, ammunition or other property. Areas where personnel were working must be swept to remove marker signs emplaced to locate bunkers, automatic weapons sites, or other sensitive fixtures for unfriendly forces outside the installation.

p. Establishment of hasty defensive perimeters during the conduct of other operations requires consideration of the following:

(1) Ambush patrols and early warning devices to cover avenues of approach into the perimeter. Emplace the ambushes while moving into the area.

(2) Stop before dark to set up camp for the night.

(3) Halt on the most defensible terrain available. During rest stops, insure that designated guards are alert and outposts are placed.

q. The VC will make every effort to remove all casualties, weapons and documents from the battlefield in order to prevent accurate assessment of their losses. Use long range automatic weapons fire combined with continuous illumination of the area to keep the VC from "policing" the battlefield as they withdraw. Casualties left behind by the VC are often booby trapped. Exercise extreme caution when searching or moving VC casualties.

r. Remove all trip flares and booby traps at first light.

s. Do not disclose automatic weapon positions by firing when the VC harass with sniper fire.

t. Increase security forces on nights of extremely limited visibility (no moon) and during periods of heavy rain. The VC often attack at such times.

#### 44. Sentry Dogs

Sentry dog units are employed to safeguard installations against unauthorized entry. Each dog is trained to use its keen sense of hearing and smell to alert its handler to the presence of humans and animals. On order from

the handler, the sentry dog will attack an intruder. Guard duty tours for sentry dogs should be about four hours long, covering a post of approximately 200 yards in length. Rotation between guard posts should be on a regular basis to prevent the dog from becoming overconfident and less alert in familiar surroundings.

#### SUMMARY

Early, detailed and continuous acquisition of intelligence information in all operations will facilitate the application of maximum combat power at precise times and places, utilizing fully the time and space advantages our greater mobility afford us. The success of military operations in the counterinsurgency environment of Vietnam depends upon the application of old and new tactics and techniques -- in bold and imaginative ways. These must constantly be improved to bring the enemy to combat repeatedly and inflict heavy losses upon him.

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### CHAPTER 4

#### COMBAT SUPPORT

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##### INTRODUCTION

Tactical air support, armed helicopters, artillery, and naval gunfire have proven extremely effective against the Viet Cong. As a consequence he has learned to take full advantage of inadequacies in fire support planning and exploit the limitations placed on fire support means by bad weather or poor visibility. Thorough fire support planning and coordination is therefore imperative. A number of effective techniques for the employment of these combat support means are discussed below.

##### SECTION I. AIR SUPPORT

###### 1. General

Air power in all its forms plays a vital role in the war against the Viet Cong. Well-directed air strikes have often forced them to abandon carefully dug-in complexes. The frequent and deadly attacks by Strategic Air Command B-52 bombers have made VC installations in former safe havens vulnerable and lucrative targets. Improvements in the use of aircraft for all purposes will continue to increase the effectiveness of our air power.

2. Tactical Air (figures 55 thru 69)

a. Missions of Tactical Air. The primary role of tactical air in Vietnam is to provide close air support for ground forces and to strike VC encampments and routes of communication. Tactical air also performs reconnaissance and can provide assault airlift as required.

b. Armament Available.

(1) High explosive bombs varying from 100 to 2000 pounds are used when destruction of a target is desired.

(2) Napalm is an effective antipersonnel weapon frequently used against the VC. Although it will neither collapse nor destroy reinforced bunkers, it will usually kill the occupants.

(3) Fragmentation bombs are extremely effective against exposed personnel. Since they explode in the air and shower thousands of fragments in all directions, they are excellent preassault and area suppression munitions.

(4) Air-to-surface missiles are used against fortified positions and other point targets. Thus far, only a few VC targets suitable for destruction by air-to-surface missiles have been located.

(5) 20mm guns installed on most tactical aircraft provide highly accurate firepower effective against



Figure 55. O-1 Observation Aircraft



Figure 56. B-57 "Canberra"



Figure 57. A-1E "Skyraider"



Figure 58. A-1H "Skyraider"

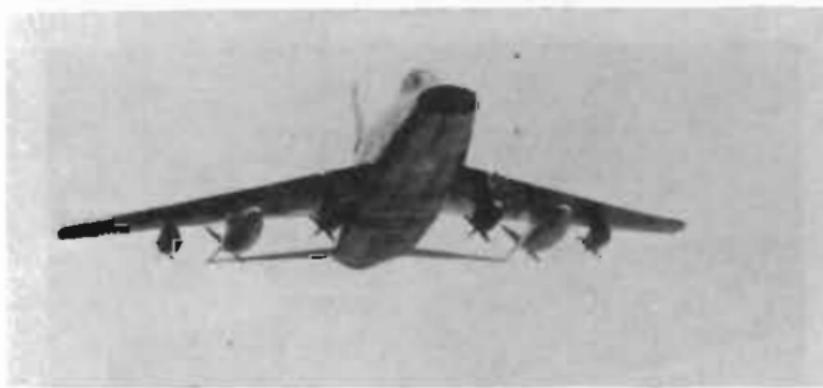


Figure 59. F-100 "Supersabre"



Figure 60. F-105 "Thunderchief"



Figure 61. A4C "Skyhawk"



Figure 62. F8A "Crusader"



Figure 63. F5



Figure 64. F4H "Phantom"



Figure 65. A3B "Skywarrior"

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Figure 66. RF 101 "Voodoo"

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Figure 67. AC 47

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Figure 68. C 123

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Figure 69. C 130

a large variety of ground targets.

c. Operating Techniques.

(1) Tactical Air Control System (TACS).

(a) The tactical air control center (TACC) is located at Tan Son Nhut Air Base near Saigon, and is the combined US and VNAF facility which plans and coordinates the entire tactical air effort within Vietnam.

(b) Direct air support centers (DASC) are located with the four corps headquarters. The primary function of the DASC is to process and approve all requests for immediate and preplanned close air support.

(c) Tactical air control parties (TACP) are attached to each battalion and higher level ground force tactical headquarters. The TACP at separate brigade and division level consists of an air liaison officer (ALO). The TACP at battalion level consists of one forward air controller (FAC). All TACPs have communications personnel and equipment. A FAC is attached to each province advisory team in Vietnam. This FAC advises the province chief on the use of tactical air and controls the air strikes within that province. TACPs are normally located with the unit fire support coordination center (FSCC) or tactical operations center (TOC) as appropriate. Duties of TACP personnel are as follows:

1 The ALO advises the ground force unit commander on all matters pertaining to the capabilities and employment of tactical air.

2 The FAC is an experienced tactical fighter pilot who has extensive knowledge of tactical air ordnance capabilities and fighter delivery techniques, and who has been specially trained to perform his primary mission of directing air strikes. Experience in Vietnam has shown that the FAC is most effective in directing air strikes when he is airborne. When an ARVN Ranger Battalion in IV Corps was hit by a large VC force one night in March 1965, a FAC at province headquarters immediately requested a flareship and fighters. He proceeded to the battle area in an O-1F and established radio contact with the US advisors who were trapped in the compound. Being completely familiar with the area and having obtained the location of VC forces from the US advisors, the FAC was able to direct the fighters effectively on target. The Ranger unit, together with the Americans, took advantage of this situation and withdrew to a secure area. A reaction force sent in the next morning credited the air strike with killing 38 VC and preventing them from overrunning the post.

(2) Air Support Request Procedures.

(a) Requests for immediate air strikes may originate at any echelon and are forwarded through normal channels of communication to the battalion CP. The

requests are validated by the battalion commander or his representative and given to the TACP for submission directly to corps headquarters direct air support centers (DASC). The TACPs at province, brigade and division levels monitor all requests and coordinate with the fire support coordination center (FSCC) at their level. Provided no echelon above the battalion disapproves the request, the DASC completes the necessary coordination and orders the mission. If available aircraft are in the vicinity of the target area, the response time will be a matter of minutes. If the immediate air strike mission requires the scrambling of fighters from ground alert, it may be thirty minutes before the fighter aircraft are over the target area.

(b) Preplanned requests for air support are forwarded to the DASC where they are evaluated, assigned a priority, consolidated and then incorporated into the fire support plan for the attack.

(3) Locating VC Movement at Night. Two techniques for locating VC movement at night have proven to be extremely successful. Both methods, "Snipehunt" and "Lightning Bug", employ airborne radar combined with quick reacting armed aircraft.

(a) Snipehunt. Fighter aircraft are the quick reaction fire power used in the Snipehunt. Once a target has been located by airborne radar and clearance has been obtained from the ground force commander, a flareship is called in to illuminate the target area for a FAC-controlled fighter aircraft. An example of the effectiveness of this technique was demonstrated in August 1965. The VC had just completed loading seven sampans with

supplies, and started moving across the Saigon River in the middle of the night. The sampans' movement was detected by airborne radar and, in a matter of minutes, airborne fighter aircraft and a flareship were summoned and all seven sampans were sunk.

(b) Lightning Bug. The Lightning Bug method employs a team of searchlight-equipped helicopters and three or four armed helicopters. After the target has been located by airborne radar and clearance obtained from the ground force commander, the helicopter team is called into action. The searchlight helicopter illuminates the target and the armed helicopters attack and destroy it. A variation of this method is the armed ship and the searchlight helicopter working as a team without the assistance of radar. Once a target is identified and illuminated, the armed ships attack and destroy it. Lightning Bug teams have been particularly successful against VC vehicular and boat movements.

### 3. Armed Helicopters

a. Missions. Armed Helicopters can provide timely and accurate fire support in both offensive and defensive actions. They are normally employed to escort transport helicopters and deliver suppressive fires. Other missions include:

(1) Armed visual reconnaissance. The purpose of this type mission is to obtain enemy information and to locate and destroy VC targets. Normally a minimum of two armed helicopters are utilized.

(2) Convoy escort. There are two methods of performing this mission. In the first method, an O-1 type observation aircraft stays with the convoy at all times, while armed helicopters deploy by bounds as the convoy progresses. The armed ships are always within five minutes flying time of the convoy. If the convoy is ambushed, the O-1 pilot immediately scrambles the armed ships by radio and directs the initial strikes on the VC ambush force. The second method -- armed helicopters flying continuous column cover -- is used when an O-1 aircraft is not required because the convoy distance is short or if the danger is great.

(3) Overhead cover for ground operations. The purpose here is to allow uninterrupted movement of friendly forces by providing aerial fire support as needed. The armed ships fly at an altitude which will afford the best observation without undue risk. They assist the ground force commander by:

- (a) Screening flanks, front and rear of his troop units.
- (b) Advising him of likely ambush sites.
- (c) Advising him of likely enemy locations so he can reconnoiter by fire with small arms, artillery or armed helicopters.
- (d) Providing radio relay and control.

b. Armament. Armed helicopters may have one or more of the following weapons systems: four 7.62mm

machine guns and fourteen 2.75 inch aerial rockets; two rocket pods, each carrying twenty-four 2.75 inch rockets; a nose-mounted XM-75, 40mm grenade launcher; two pod-mounted .50 caliber machine guns; two 7.62mm machine guns mounted on each side of the helicopter; and/or three wire-guided missiles mounted on each side of the helicopter.

c. Operating Techniques.

(1) For the proper employment of the ships and their armament, the pilots must know:

(a) The location of friendly forces. Identify friendly unit locations by using panels, smoke, colored scarves or an easily identifiable terrain feature.

(b) The location of enemy forces. Identify positions of VC forces by giving the pilot an azimuth and distance from a known location. When identifying VC forces, exercise extreme care to avoid inflicting unnecessary noncombatant casualties.

(c) The long axis of the target. Maximum advantage should be taken of the armed helicopter weapons "beaten zone" by identifying the long axis of the target.

(d) Friendly force movements, artillery fires and the presence or absence of tactical air support. This information allows the pilot to plan his time over the target area and his rate of ammunition expenditure.

(2) Armed helicopters can be successfully employed at night if the target is illuminated by flares, searchlights, or by moonlight. This capability has been used to

counter VC night attacks on many occasions.

## SECTION II. ARTILLERY SUPPORT

### 4. General

The missions assigned to artillery units, the ammunition used, and the basic techniques of employment are not different in Vietnam than elsewhere in the world. Here, as in Korea, artillery accounts for a large percentage of the enemy casualties. Instances have been discovered in which the Viet Cong have actually called off attacks on friendly installations because of their fear of artillery. There are, however, refinements in artillery techniques required by the special circumstances of the fight against the VC. For example, special attention must always be given to the reduction of casualties among noncombatants. Listed below are a number of local variations in normal artillery employment procedures which may increase the effectiveness of fire support missions.

### 5. Employment Techniques

#### a. Positioning Artillery.

(1) Since the effectiveness of artillery fire decreases as the number of firing elements is reduced, artillery normally should not be employed in less than battery size units. Three suitable battery position layouts which may be used are the "Triangular," "Hexagonal" and "Star" formations. The advantage of such dispositions is that a good dispersion pattern is maintained regardless

of the direction of fire. The large number of areas requiring artillery support may reduce the number of units which can be massed on a single target; however, each fire unit should have another fire unit within supporting range for mutual defense against ground attack. Artillery must be disposed to provide support for all deploying units at all times.

(2) Be prepared for the unexpected; never assume artillery will not be needed. The threat of a VC attack from any direction is constant. Artillery units should always be prepared to fire in any direction from the firing position.

(3) The requirement for all-around fire support necessitates a change in the normal plotting chart procedures used in the FDC. Battery positions are frequently plotted at the center of the chart and the size of the chart is increased on one or all four sides to permit maximum range measurements for the weapon being employed.

(4) Azimuth stakes should be positioned around the gun pit revetment every 800 mils to facilitate rapid change of direction and reduce the possibility of firing in the wrong direction (3200 mils out). For the same reason, fire commands include the desired azimuth of fire as their second element.

(5) The VC try to camp out of range of the artillery whenever possible. VC operational plans take into account range and location as well as probable time required for the artillery to respond to fire requests. Frequent changes of position will add to the effectiveness and the security of artillery and disrupt VC plans.

(6) Artillery units should also be prepared for rapid movement to new areas by boats, helicopters, transport airplanes, M113s or conventional vehicles. Helicopter air movement has the advantage of increasing the number of accessible firing positions while not requiring secure ground routes.

(7) The VC consider artillery positions prime targets for mortar and ground attack. Consistent with providing prompt fire support, defensive positions with overhead protection should be prepared and improved as time permits. The FDC and ammunition should be revetted first and the position continuously improved while occupied. Defensive positions should be destroyed upon departure, since the VC may occupy abandoned positions and attempt to prevent our return. In most cases, artillery security requires reinforcement of artillery position area defenses with infantry.

b. Fire direction.

(1) Ground observation of artillery fire is hampered by dense vegetation, especially in the jungle areas of II and III Corps. To overcome this limitation, units should take advantage of air observers for adjustment of artillery fire. The employment of WP, smoke, or a high air burst on the first round will often assist the observer in bringing subsequent rounds rapidly on target.

(2) Ground and aerial observers can often be employed effectively as a team. The ground observer marks his position and gives directions to the aerial observer, who subsequently adjusts the fire.

(3) A system has been developed for rapid location of target areas using an alphabetical designation for each 1000 meter map grid square within a unit's sector of responsibility. The system has been used to good advantage by some units.

c. Coordination and Communication.

(1) There is a great volume of air traffic throughout Vietnam. Consequently, the ability for close, rapid coordination must be maintained with operational flight elements at all times. In addition, each unit should have an individual at the firing position watching for friendly air craft along the gun-target line. Artillery can be safely fired over air columns if the fires are closely coordinated with the flight leaders.

(2) Radio has been the primary means of communication for the artillery. Experience has indicated that most artillery units are employed beyond the normal rated range of their FM radios. As a result, it frequently is necessary to rely on continuous employment of FM airborne radio relays and on use of AM radio communication in order to control artillery fires.

d. Special Considerations.

(1) In addition to delivering destructive fires on the VC, artillery can be utilized to illuminate critical areas at night, to orient friendly combat forces in dense undergrowth areas, to flush VC from hidden locations, to deny him escape routes, to deceive him on avenues of attack, to interdict suspected VC positions and for numerous other missions. Harassing and interdiction (H&I)



Figure 70. 155mm Howitzer



Figure 71. 175mm Gun

fires based on an understanding of the current intelligence situation can be very effective in demoralizing the VC both day and night.

(2) The selection of fuze action cannot invariably be dictated by terrain, as might be expected; rather, the fuze action that actually gives the best results against each specific target must be determined and selected. For example, it had long been thought that the employment of the VT fuze in the dense jungle areas of II Corps would be ineffective. The VC had placed numerous snipers high in the trees in this zone. VT fuze action was used successfully to attack this type of target.

(3) Aerial artillery of the Air Cavalry Division provides an added artillery support capability. One of the artillery battalions in the division is equipped completely with helicopters armed with 2.75 rockets, SS-11 missiles, and searchlights. Elements of the battalion are used to provide closely coordinated fires in support of air assault elements, against targets that rapidly develop on the battlefield, and for attacking moving targets. The artillery countermortar program is enhanced by placing aerial artillery helicopters on countermortar air alert. These airborne ships are continuously alert for mortar flashes and immediately strike known or suspected locations.

### SECTION III. NAVAL GUNFIRE SUPPORT

US Navy ships operating off shore can provide fast, accurate fire support for ground forces operating in the vicinity of the coast. This support can be either direct fire, where the target is visible from the ship, or

indirect fire directed by air or ground observers. Because of their mobility, ships can be used to provide fire support over a wide area with little time lost between missions. Their support should be used whenever conditions permit. Ammunition available includes high explosive, white phosphorous, and illuminating rounds with mechanical time, point detonating, or VT fuzes.

#### 6. Requests for Naval Gunfire

Any qualified observer can originate a request for artillery. The request for naval gunfire support (NGFS) is transmitted through normal fire support channels to the nearest fire support coordination center (FSCC) where a naval gunfire liaison officer (NGLO) is located, or to the nearest coastal surveillance center (CSC). The CSC or NGLO will complete processing of the request. The NGLO will also make arrangements for the necessary observers or spotters. Requests for NGFS must contain the following information:

- (1) Coordinates of target.
- (2) Target description (troops in open, caves, etc.).
- (3) Time ship is to commence firing.
- (4) Type ammunition desired.

#### 7. Gunfire Support

- a. NGFS falls into two broad categories:

(1) Pre-planned (requested or scheduled 48 hours or more in advance).

(2) Nonscheduled (normally requests requiring quick response).

b. An example of the rapid reaction and accuracy of naval gunfire support occurred during the US Marine Corps operation "Starlite" in August 1965. A large group of VC attempting to cross a clearing to escape encirclement were seen by a forward observer. The grid coordinates of the clearing were radioed to the offshore ships and, within seconds, the first rounds were "on the way." When the smoke had settled, the clearing was littered with the bodies of over 60 VC.

#### 8. NGFS Ship Capabilities:

TYPE SHIP	LARGEST GUN	RATE OF FIRE (RD/MIN)	MAXIMUM EFFECTIVE RANGE
Heavy Cruiser (Figure 72)	8"	4	23,800 meters
Light Cruiser	6"	8	19,200 meters
Destroyer (Figure 73)	5"	15	13,700 meters
Destroyer Escort	3"	20	6,900 meters
Rocket Ship	5" rkt	200.	9,100 meters



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Figure 72. USS ST. PAUL



Figure 73. USS RICHARD B. ANDERSON

## SUMMARY

Effective use of our combat support means has resulted in large numbers of VC casualties. To prevent prohibitive losses, the VC will try to neutralize or avoid our supporting fires. Sound and timely fire support planning and coordination will anticipate and thwart the defensive actions of the enemy. To be truly effective, this planning and coordination must be accomplished at all command echelons and in both the supporting and combat arms.

Users of this handbook are encouraged to submit recommendations for its improvement to HQ, MACV, ATTN: J343 APO US Force 96243. Comments should refer to specific pages and paragraphs.

**APPENDIX I**  
**PERSONAL HYGIENE TIPS**

**1. Uniforms**

**DO NOT CUT OFF OR SHORTEN SLEEVES ON FATIGUE UNIFORMS.** Keeping the forearms covered prevents cuts and infections caused by dense under-brush and reduces the incidence of mosquito bites.

**2. Food**

**LOCAL PRODUCE MUST BE PROPERLY CLEANED AND PREPARED.** All local vegetables must be soaked in chlorinated water for thirty minutes and cleaned before eating. Fruits must be peeled before eating.

**3. Water**

**a. BOIL OR TREAT ALL WATER USED FOR DRINKING.** All water in Vietnam must be assumed to be non-potable and must be boiled or disinfected with chlorine or iodine before drinking. When using water purification tablets, use one tablet per canteen if the water is clear, two if the water is cloudy. Permit the water to stand 30 minutes before drinking. Water used to make ice should be treated in the same manner.

**b. DRINK MORE WATER.** The body requires more water in a tropical climate to replace body fluids lost due to the heat and humidity. Carry two canteens of water in field operations and drink as much water as your body requires. However, you should drink small amounts at a time to avoid the possibility of getting stomach cramps.

**4. Insects**

**a. USE INSECT REPELLENT FREELY.** Insect-borne diseases common in Vietnam are malaria, dengue fever, encephalitis and plague. The only sure way to prevent contracting any of these diseases is not to get bitten by disease-bearing insects. Liberal use of insect repellent and the use of mosquito nets will assist in the prevention of insect bites.

**b. TAKE THE ANTIMALARIA TABLET WEEKLY.** Most malaria can be prevented if the antimalaria tablet is taken faithfully once a week. Commanders must establish a specific day of the week for all personnel within their command to take the antimalaria tablet.

**5. Snakes**

**TREAT ALL SNAKEBITES AS POISONOUS.** If an individual is bitten by a snake, take no chances; consider the snakebite to be poisonous. If possible, kill and keep the snake so that it can be identified and the proper anti-venom serum given. Be sure all personnel are familiar with first aid procedures for snake-bites.

**6. Leeches**

**AVOID LEECH BITES.** Leeches live in water or on moist jungle undergrowth. Before entering streams, canals or rivers, tighten jacket cuffs to the wrists and fasten the bottom of trousers legs outside the boot. Apply insect repellent to uncovered portions of the body and check the clothing and body frequently. If leeches are found on the body do not pull them off quickly as they

will leave their heads in the bite and thus cause infection. Insect repellent or heat (from a cigarette for example) will cause them to release their grip and drop off. If these remedies are not available, remove the leech carefully, attempting to remove the head. Seek treatment from your unit medical personnel.

#### 7. Fungus

**TAKE MEASURES TO PREVENT FUNGUS INFECTIONS.** Superficial fungus infections such as "Jock itch" and athletes foot are quite common in a tropical climate. Cleaning and drying of armpits, groin and feet whenever possible will help prevent fungus infections as well as frequent changes of clothing and socks. Apply foot powder daily. If fungus persists or worsens, seek proper medical attention.

#### 8. Sunstroke

a. **KNOW THE SYMPTOMS OF SUNSTROKE.** They are:

- (1) Flushed face.
- (2) Dry skin.
- (3) Spots before eyes.
- (4) Headache.
- (5) High temperature.

b. If sunstroke is known or suspected, treat in the following manner:

- (1) Remove individual from sun.
- (2) Loosen clothing.
- (3) Elevate head and shoulders.
- (4) Apply cool compresses or bathe patient in cool water.
- (5) Give patient cool salt water.

#### 9. Heat Exhaustion

a. **KNOW THE SYMPTOMS OF HEAT EXHAUSTION.** They are:

- (1) Dizziness.
- (2) Nausea.
- (3) Cramps.
- (4) Pale face.
- (5) Cold clammy skin.
- (6) Weak pulse.

b. If heat exhaustion is known or suspected, treat in the following manner:

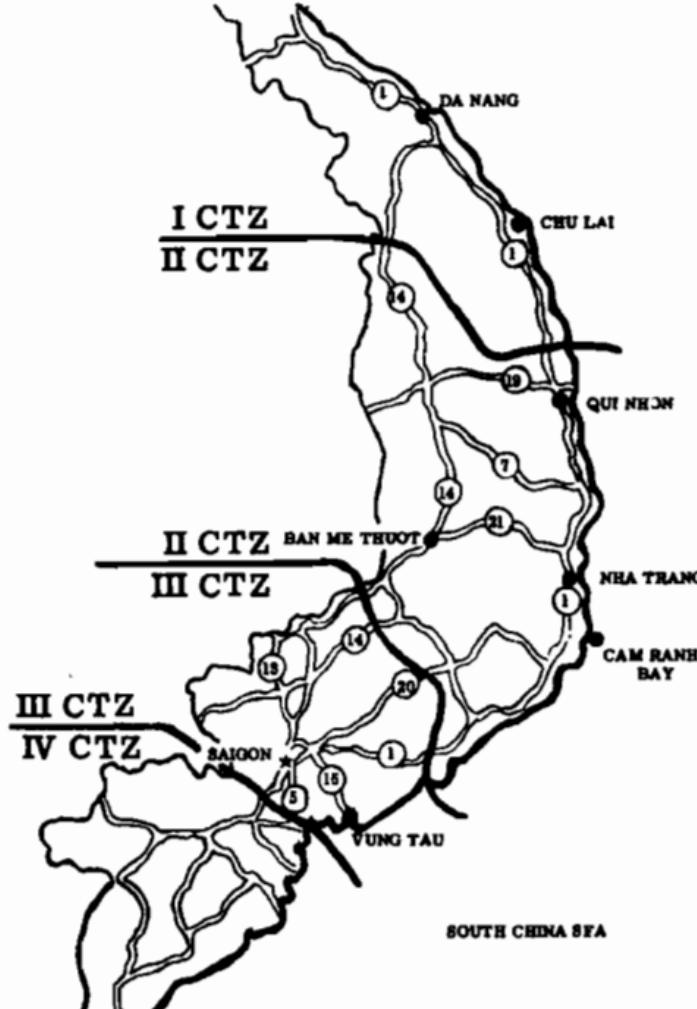
- (1) Move patient to shade.
- (2) Loosen clothing.
- (3) Give patient cool salt water.

## APPENDIX II

## CONVERSION TABLE - WEIGHTS AND MEASURES

MULTIPLY	BY	TO OBTAIN
Acres	.405	Hectares
Caliber	25.4	Millimeter
Centimeters	.3937	Inches
Degrees	17.8	Mils
Fathoms	6	Feet
Feet	.1667	Fathoms
Gallons (US)	3.785	Liters
Grains	.00228	Ounces
Grams	.03527	Ounces
Hectares	2.471	Acres
Inches	2.54	Centimeters
Kilograms	2.2	Pounds
Kilometers	.6214	Miles
Knots	1.152	Miles per hour
Liters	.2642	Gallons (US)
Meters	1.094	Yards
Miles	1.609	Kilometers
Miles per hour	.8684	Knots
Millimeter	.0394	Caliber
Mils	.056	Degrees
Ounces	437.5	Grains
Ounces	28.35	Grams
Pounds	.4536	Kilograms
Temperature (C) +17.8	1.8	Temperature (F)
Temperature (F) -32	.5556	Temperature (C)
Yards	.914	Meters

## APPENDIX III -- ROAD MAP



## THE SECRETARY OF DEFENSE

## WASHINGTON

10 June 1966

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