Figure 74. Open loop.

Figure 75. Clothespin.

Figure 76. Knife.
Figure 77. Floor board.

Figure 78. Common series circuit.

Figure 79. Leapfrog series circuit.
TARGET RECONNAISSANCE REPORT GUIDE

TARGET: __________________________________________ 
LOCATION: ____________________________________________ 
TIME OBSERVED: ________________________________________ 
GENERAL DESCRIPTION: ________________________________ 
PROPOSED ACTION: ____________________________________ 

ROUTE: TO AND FROM TARGET AREA, APPROACH, AND WITHDRAWAL
ROUTES, RALLYING POINTS, MISSION SUPPORT SITES, CACHE SITES,
AND FINAL ASSEMBLY AREAS MAY BE SELECTED.

REQUIREMENTS: (DETERMINE AVAILABILITY BEFORE RECON)
EXPLOSIVES: __________________________________________ 
EQUIPMENT: __________________________________________ 
PERSONNEL: __________________________________________ 
TIME: ________________________________________________ 

REMARKS:
UNUSUAL FEATURES OF SITE: ____________________________ 
GUARD SYSTEM: ________________________________________ 

LABOR AND TIME ESTIMATE REQUIRED FOR BYPASS OR REPAIR:

SKETCHES: (ON REVERSE SIDE)
SITUATION MAP SKETCH (OVERHEAD VIEW): MAGNETIC NORTH, PRINCIPAL TERRAIN CONCEALMENT, AVENUES OF APPROACH TO TARGET, DIRECTION OF ENEMY, ETC.

LINE DRAWING OF TARGET (SIDE OR ANGLE VIEW): CRITICAL OVER-ALL DIMENSIONS AND PLACEMENT OF CHARGES.
CROSS SECTIONS OF MEMBERS TO BE CUT (CUT-AWAY VIEW):
EXACT DIMENSIONS.
SITUATION MAP SKETCH (INCLUDE PRINCIPAL TERRAIN FEATURES; IMMEDIATE AVENUES OF APPROACH, OBSERVATION AND COVER, MAP COORDINATES)

DRY CREEK BED PROVIDES COVERED APPROACH FOR FOOT TROOPS.

SCATTERED TREES, FEW CLUMPS BRUSH.

COORDINATES OF BRIDGE (73654430)

WHITE RIVER

BOULDER COVERED HILL COMMANDING BRIDGE AND APPROACH.

Figure 80. Situation map sketch.
CHAPTER 8
TACTICS

48. TROOP LEADING PROCEDURE

a. Begin Planning.

(1) Study terrain from map, sketch, or serial photo for:
   (a) Critical terrain features.
   (b) Observation and fields of fire.
   (c) Cover and concealment.
   (d) Obstacles.
   (e) Avenue of approach.

(2) Make quick estimate of situation (as thorough as time permits).

(3) Make preliminary plan.

b. Arrange For:

(1) Movement of Unit. (Where, when, how?)

(2) Reconnaissance (select route, schedule, persons to take along, and use of subordinates).

(3) Issuance of order (notify subordinate leaders of time and place). (See appendix 3.)

(4) Coordination (adjacent and supporting units).

c. Make reconnaissance. (Examine the ground—see a, above.) If necessary, change preliminary plan.

d. Complete plan (receive recommendations, complete estimate, change preliminary plan as necessary, and prepare order). (See appendix 3.)

e. Issue order (include orientation on terrain if possible). (See appendix 3.)

f. Supervise.

49. PATROL WARNING ORDER

The patrol warning order should consist of the following items of information:

a. A brief statement of the enemy and friendly situation.
b. Mission of the patrol.

c. General Instructions:

(1) General and special organization.

(2) Uniform and equipment common to all, to include identification and camouflage measures.

(3) Weapons, ammunition, and equipment each member will carry.

(4) Who will accompany patrol leader on reconnaissance and who will supervise patrol members' preparation during patrol leader's absence.

(5) Instructions for obtaining rations, water, weapons, ammunition, and equipment.

(6) The chain of command.

(7) A time schedule for the patrol's guidance. As a minimum, include meal times and the time, place, and uniform for receiving the patrol leader's order.

50. PATROL LEADER'S ORDER

a. Situation:

(1) Enemy forces: Weather, terrain, identification, location, activity, and strength.

(2) Friendly forces: Mission of next higher unit, location and planned actions of units on right and left, fire support available for patrol, and mission and routes of other patrols.

(3) Attachments and detachments.

b. Mission: What the patrol is going to accomplish.

c. Execution (subparagraph for each subordinate unit):

(1) Concept of operation.

(2) Formation and order of movement.

(3) Route and alternate route of return.

(4) Departure from, and reentry of, friendly area(s).

(5) Rallying points and actions as rallying points.

(6) Actions on enemy contact.
(7) **Actions at danger areas.**

(8) **Actions at objective.**

(9) **Rehearsals and inspections.**

(10) **Debriefing.**

d. **Administration and Logistics.**

(1) **Rations.**

(2) **Arms and ammunition.**

(3) **Uniform and equipment (state which members will carry and use).**

(4) **Method of handling wounded and prisoners.**

e. **Command and Signal.**

(1) **Signal:**

   (a) Signals to be used within the patrol.

   (b) **Communication with higher headquarters:** radio call signs, primary and alternate frequencies, times to report, and special code to be used.

   (c) **Challenge and password.**

(2) **Command.**

   (a) **Chain of command.**

   (b) **Location of patrol leader and assistant patrol leader information.**

51. **TARGET ANALYSIS AND SELECTION**

   a. Select targets for attack by elements of the area command based on the following factors of target selection:

   (1) **Criticality:** Critical to accomplishment of mission.

   (2) **Vulnerability:** Susceptibility to attack by the means available to the area command, i.e. fire, demolitions.

   (3) **Accessibility:** Measured by the ability of the area command to infiltrate or gain access to the target area.

   (4) **Recoverability:** Ability and time involved by the enemy to restore a damaged facility to its normal operating capacity or to recover from an attack.
Figure 81. Location of patrol leader and assistant patrol leader information.
b. In considering criticality of a target, consider all of the ramifications of the entire target complex whether it be transportation, communications, industry, power, fuel or military installations, and personnel.

c. Use all elements of the area command to produce diagrams, photographs, and other intelligence on a particular target complex.

d. Major Factors Pertinent to Destructive Mission:

(1) Detailed target intelligence.

(2) Extensive ground reconnaissance.

(3) Sound plan with alternates.

(4) Detailed rehearsals.

(5) Achieve maximum destruction with minimum effort, time, material, and personnel.

e. A common target is a critical item of equipment or material found in the majority of industries which, if destroyed, will slow down or stop production.

(1) A common target:

(a) Serves a critical need.

(b) Is difficult to replace.

(c) Is difficult to repair.

(d) Is easy to destroy.

(e) Is easy to recognize.

(2) Categories of common targets:

(a) Power.

(b) Materials handling.

(c) Transportation.

(d) Storage.

52. RAIDS AND AMBUSHES

a. Purposes of a Raid:
(1) Destroy or damage vital installations, equipment, and supplies.
(2) Capture supplies, equipment, and key enemy personnel.
(3) Divert enemy troops from other operations.
(4) Release friendly prisoners of war.

b. Purposes of an Ambush:
(1) Destroy or capture enemy personnel and supplies.
(2) Harass and demoralize the enemy.
(3) Delay or block movement of personnel and supplies.
(4) Channel enemy movement by making certain routes useless for traffic.

c. Composition of Raid and Ambush Forces:
(1) Command element: Commander, communications, observers, medical personnel, and other liaison personnel such as underground members.
(2) Assault element:
   (a) Assault team accomplishes primary mission.
   (b) Support team provides fire support within the objective area.
   (c) Special task teams eliminate sentinels, breach obstacles, destroy targets, conduct searches, lay mines, or other similar tasks. (These may be separate teams or additional duties assigned to individuals of the assault or support teams.)
(3) Security element provides all-around security for the assault element to prevent enemy from leaving or entering the area, provides early warning of enemy approach, covers the withdrawal of the assault element, and acts as rear guard for the raid force. (This element may be divided into separate security teams.)

d. Characteristics of Ambush Site:
(1) Target must be channeled.
(2) Good fields of fire to target.
(3) Good cover and concealment for ambush force.
(4) Natural obstacles to prevent enemy from reorganizing or fleeing from site.
(5) Concealed approach and withdrawal route from site for ambush force.
e. Conduct of Raid and Ambush:

(1) Always put 24-hour surveillance on target or objective area or time of attack.

(2) Always rehearse the elements of a raid and ambush force.

(3) Always strike quickly to gain surprise.

(4) Always withdraw by a different route than the one used to objective area.

53. PATROL TIPS

a. Preparation:

(1) Make a detailed map study; know the terrain and route by memory, including features which will aid in navigation. Confirm these terrain features as you pass over or near them.

(2) Consider the use of difficult terrain in panning your route; you are less likely to encounter the enemy.

(3) In mountainous terrain, plan to use ridge lines for movement whenever possible, but stay off the skyline.

(4) Plan an offset in your route when applicable. An offset is planned magnetic deviation to the right or left of the straight line azimuth to an objective. Use it to verify your location right or left of the objective. Each degree you offset will move you about 17 meters to the right or left for each 1,000 meters traveled.

(5) When your patrol is to infiltrate enemy lines, select a rendezvous point behind enemy lines. Select an alternate rendezvous point for use if the first point is occupied by the enemy.

(6) Light automatic weapons are good on combat patrols where terrain or conditions of visibility will not permit effective employment of machineguns. Reconnaissance patrols should carry at least one automatic weapon.

(7) Clean, check, and test-fire all weapons before departure.

(8) Consider terrain vegetation. Gloves may be necessary to protect hands from briars and scratches.

(9) Consider carrying two pairs of binoculars, wire cutters, fuze crimpers, and other small items.

(10) Carry at least two flashlights for night operations and extra batteries for them and radios.
(11) Every man should carry his canteen and poncho. Ponchos can be used to make litters, construct rafts, conceal lights, and as shelters.

(12) Have every man carry an extra pair of socks. Carry a sharp knife on the harness or concealed in a boot.

(13) Carry Individual weapons cleaning equipment on all patrols.

(14) Consider the use of scout dogs if they are available.

(15) A length of rope, secured to the harness, can be used for binding prisoners, climbing or descending obstacles, and crossing streams.

(16) Two pieces of luminous tape, each about the size of a lieutenant's bar, worn on the back of the collar, aid in control and movement on dark nights. Turn the collar down when close to the enemy. The tape can also be worn on the back of the cap, but cover or remove it when close to the enemy.

(17) Use friction tape to secure rifle swivels, sling, and other items which might rattle.

(18) Be sure to camouflage the back of your neck, behind your ears, and the back of your hands.

(19) A clear acetate sheet placed over luminous tape can be used to make rough strip maps at night. The map will glow in the dark, making the use of light unnecessary. Use a grease pencil so information can be easily erased.

(20) Designate at least two pacers and use the average of their individual counts.

(21) Preset compasses before departing.

(22) Prepare a list of coordination questions to be asked at the position from which you depart.

(23) When appropriate, arrange to have a light aircraft reconnoiter ahead of your patrol to keep you informed of any activity or ambushes along your route.

(24) Take your assistant patrol leader or element leaders with you on reconnaissance.

(25) Prearrange and rehearse all signals to be used. Keep signals simple.

(26) If you have a night patrol, plan time for your patrol members to adapt their eyes to darkness.

(27) Do not carry maps marked with information that might aid the enemy.
(28) Conduct rehearsals on terrain similar to that over which you will operate. Conduct day and night rehearsals for a night patrol.

(29) Inspect your patrol carefully before rehearsals and before departure. Question men to check their knowledge and understanding of the actions planned.

b. Execution.

(1) Have your assistant patrol leader check and count the patrol through friendly positions.

(2) On small patrols, the count should be sent up automatically after each halt or passage of a danger area. In large patrols, use the chain of command to account for men.

(3) Use the point man as a point and not as a compass man; he is primarily concerned with security. Have the second or third man responsible for navigation. Check navigation frequently.

(4) Use a code word or a password other than the assigned challenge and password forward of friendly positions.

(5) At halts and during movement, odd numbered men to observe to the left, even numbered men to the right.

(6) When moving at night take advantage of any noises such as wind, vehicles, planes, shelling, battle sounds, and even sounds caused by insects.

(7) Stay off roads and trails for movement unless their use is deemed absolutely necessary.

(8) When close to the enemy's main battle position, avoid lateral movement across its front.

(9) When men have difficulty staying awake on security and at halts, minimize the number and length of halts and have the men assume a kneeling rather than prone position.

(10) Over short distances, such as the width of a road, the compass can be used for signaling at night. A piece of luminous tape can also be used for this purpose.

(11) There are several acceptable methods of crossing roads. Whatever the method used, the basic principles of reconnaissance and security apply. Some of the accepted methods are:
(a) Patrol can form a skirmish line and advance quickly across the road.

(b) The entire patrol can form a file, following the footsteps of the man in front in order to minimize detection of footprints.

(c) Men cross the road a few at a time until patrol is across.

(12) Crossing streams is similar to crossing roads; reconnaissance and security are both necessary.

(13) If it is necessary to leave a wounded man to be picked up on your return trip, leave another man with him, if possible. Walking wounded return on their own to friendly lines, if feasible. When close to the enemy, remove the wounded from the immediate area before applying first aid.

c. Miscellaneous.

(1) Keep the cutting edge of the entrenching tool extremely sharp. It is a good, silent weapon and can be used in lieu of a machete.

(2) A garrote can be used for killing a sentry or capturing a prisoner.

(3) Binoculars increase visibility at night.

(4) Do not jeopardize security by letting earflaps and hoods interfere with the hearing ability of the patrol.

(5) When on patrol, pass on simple instructions, allow time for dissemination, then execute.

(6) Keep talking to a minimum. Use arm and hand signals to the maximum.

(7) When reconnoitering enemy positions, keep the covering force within supporting distance of the reconnaissance element.

(8) Never throw trash on the ground while on patrol. Bury and camouflage it to prevent detection by the enemy.

(9) When possible, allow men to sleep on long patrols; but, maintain proper security.

(10) When contacting friendly agents, such as partisans, never take the entire patrol to make contact with them. Have one man make the contact and cover him.

(11) The best nights for patrols are dark, rainy, and windy nights.
Figure 82. An example of the organization for movement of a raid force.
Figure 83. Convoy with a strong security detachment.
Figure 84. Counterambush by fire and maneuver.
1 ASSAULT ELEMENTS
2 ELEMENT TO ISOLATE ADVANCE GUARD
3 ELEMENT TO CUT OFF RETREAT
4 ELEMENT TO PREVENT REINFORCEMENT
5 ELEMENT TO HALT LEADING VEHICLE OR PARTY

Figure 85. Type of guerrilla ambush.
Figure 86. Physical layout of a roadblock.
54. IMMEDIATE ACTION DRILL (FOOT)

a. Freezing Drill:

(1) Person sighting enemy freezes in aiming position.

(2) Remainder of patrol follows suit.

(3) Open fire on patrol leader's order or when enemy sights patrol.

(4) If meeting on trail, patrol moves off trail to side determined by lead scout, takes up firing position, and fires on patrol leader's order.

b. Immediate Assault:

(1) Used when:

   (a) Patrols meet and become aware of each others position at the same time.

   (b) Enemy camp is entered unexpectedly.

   (c) Enemy is moving out of range after a "freeze."

(2) Characterized by:

   (a) A frontal assault by entire patrol.

   (b) Maximum fire to the front.

   (c) Rapid execution.

c. Counterambush Drills:

(1) If entire patrol is caught in ambush, launch immediate assault into enemy positions with maximum fire by all weapons.

(2) If part of patrol is caught in ambush, those engaged return fire and those out of ambush area encircle ambush site.

55. IMMEDIATE ACTION DRILL (MOTORIZED)

a. Preparation Check List:

(1) Tops off trucks.

(2) Guards posted front and rear.

(3) Commander of troops in rear with his unit.

(4) Troops seated and equipment arranged in order that all personnel can deliver accurate fire immediately, if ambushed.
(5) Communication within the convoy.
(6) All personnel briefed thoroughly.
(7) Commander of convoy positioned to control convoy.

b. Action of Convoy if Ambushed:

(1) Vehicles in killing zone.
   (a) Drive through if possible; all personnel return fire.
   (b) Sentries return fire; remainder detruck, then sentries detruck; all
       launch frontal attack.

(2) Vehicles not in ambush detruck and launch counterattack on ambush.

56. HAMLET CORDON AND SEARCH TECHNIQUES

a. The first consideration in conducting cordon and search operations is that
   it must have a definite purpose, such as:

   (1) Destroy or capture guerrillas.
   (2) Gain intelligence.
   (3) Dissemination of psychological operations information, civic action,
       and other government sponsored activities.
   (4) Harass the guerrilla.

b. Other principles are:

   (1) Know the enemy, his tactics, equipment, and possible hiding places.
   (2) Know the village layout and the villagers.
   (3) Organize for a specific purpose based on best available intelligence.
   (4) Have a well-rehearsed procedure.

c. A cordon and search operation can be launched from a clandestine base or
   it can be a quick thrust from your home base. The operation must be secure and
   surprise is essential. An objective rallying point is used for control and no move-
   ment is conducted within the cordon (encirclement) area until all units are in posi-
   tion.

d. The majority of the cordon and search force will normally be employed on
   the cordon.
e. In order to achieve maximum benefits, interrogation techniques and procedures can best be carried out by intelligence specialists.

f. Principles of interrogation include:

(1) All interrogation is in private.

(2) Men, women, and children should be questioned.

(3) Coordination between interrogators is necessary to crosscheck answers, (e.g., children with answers of their parents).

(4) All individuals should be interrogated for the same length of time.

(5) Standard question forms should be used by interrogators in order to facilitate cross-checking and correlation between interrogators.

g. The perimeter search may be conducted by personnel from the search element with the cordon remaining in position, or it may be conducted by ordering the cordon element to sweep toward the center of the village.

h. Caution must be exercised during a cordon and search operation to avoid injuring innocent civilians.

i. Methods for control of the population within a cordon are:

(1) Assemble all villagers in a central location.

(2) Restrict all villagers to their homes.

(3) Assemble all villagers, except heads-of-households, in a central location, with the heads-of-households accompanying the search party through their respective dwellings (most preferable method).

j. The search element may be augmented by:

(1) Psychological operations teams.

(2) Civic action teams.

(3) Specialist interrogation teams.

(4) Escort troops to evacuate PW's or individuals worthy of further interrogation.

(5) Documentation teams.

k. The cordon element should be prepared to fight Viet Cong on the fringes of the village since VC will not normally draw fire on their families.
1. Cordon and search techniques for rural hamlets differ substantially from search techniques employed in cities.

m. If encircled or trapped, the VC can be expected to patrol aggressively to find gaps in troop positions or weak units in the encirclement. The VC can often find an avenue of escape over what might be considered impassable terrain or through impenetrable undergrowth.

(1) If the VC can locate a weak unit, they may attempt to form a breakout force and penetrate the encirclement.

(2) If a breakout fails, be alert for an attempt to exfiltrate the encirclement by one or two VC at a time. It is probable that an exfiltration attempt will occur during hours of limited visibility. If the VC successfully exfiltrate, they will regroup at a predesignated location outside the encirclement.
57. EVASION

a. General: First, get as far away as possible. Sometimes this may mean several kilometers; at other times, just a few meters. Plan your escape; do not run blindly. Use your head—there is no substitute for common sense. As soon as possible, sit down, think out your problem, recall what you learned in training.

b. Pinpoint your location as accurately as possible, using your compass, sun, map, known landmarks, etc. If your compass is broken or lost, remember that when facing the sunrise, north is to your left. The following methods can be used for determining direction.

(1) Using the Southern Cross: In the Southern Hemisphere you can find south by locating the Southern Cross. Compare this group of stars to a kite. If you can figure the length of the kite from the tip to tail and extend an imaginary line from the tip of the tail 4–1/2 times the length of the kite, you can determine the approximate direction of south.

(2) Using a watch to find north: Twelve o'clock is pointed toward the sun, and halfway between 12 o'clock and the hour hand will be a north-south line.

(3) Finding north on cloudy days using a watch: On cloudy days, place a stick at the center of the watch and hold it so that the shadow of the stick falls along the hour hand. One-half the distance between the shadow and 12 o'clock is north.

(4) Shadow tip method for finding directions: Drive a stake so that at least 1 meter of it is above the ground. Mark the tip of the shadow it casts. Wait for a few minutes (10 minutes is long enough) and mark the spot where the tip of the shadow is then resting. A line drawn between the two marks will always point north.

c. Study the Map. Determine the slope of the land to guide on. Notice all large waterways. People usually live and travel on the waterways. Determine the direction in which you wish to go, move in one direction, but not necessarily in a straight line. Pick a linear objective, not a point objective, because it is easier to locate. Avoid obstacles; don't fight them. Take advantage of natural cover and concealment. Blundering through jungle and wooded areas leads to bruises, scratches, and quick exhaustion.

d. Check Bearings Often. Roads and trails can be used to guide on, but never
Figure 87. Southern Cross
Figure 88. Using a watch to find north.

Figure 89. Finding north on a cloudy day using a watch.

Figure 90. Shadow tip method.
travel on them. Stay alert. Natives remain on trails by preference. A few feet from the trail you are usually quite safe. Conceal yourself upon the approach of any other person until he passes or until you determine whether or not he is friendly.

e. The easiest traveling is often on the crests of ridges. Remember, however, that crests are more exposed than hillsides, and because of ease of travel, they are apt to be traveled more frequently than other areas.

f. Rivers or streams can make good roads but remember that the majority of native villages and encampments are on water. Rafts attract attention. Floating on or close to a log or drifting bush may be the simplest way to travel. Keep to the middle of the stream. If using a native boat, sink it during periods when not in use.

g. When close to known enemy locations, move right after sunset or just before sunrise when there is sufficient light to enable you to avoid enemy installations, mine fields, sentries, etc., but dark enough to prevent recognition by the enemy. Arrange your clothing, weapons, etc., to present a profile as similar as possible to the natives of the area.

h. Be quiet, noise carries far and natives are alert to any strange noise. Bury your refuse. If the enemy finds signs of your presence, it may lead to your capture.

i. Do not sleep near your fire or your water supply. Get far enough away to be concealed.

j. If lost in grass that is so tall that you cannot see over it, as a last resort cut down enough to give you some freedom of movement and, using your machete or any other tool, dig a hole to crawl into and set fire to the grass. Take every precaution not to get burned by fire or asphyxiated by smoke.

k. The jungle provides many hiding places. You may have to use them. Bamboo thickets are excellent, because you cannot be approached without being alerted by the noise of dry bamboo.

l. When approaching camp use extra precaution, for the camp is probably being watched.

m. At all times, when hiding or remaining in one location, be sure to plan more than one exit.

58. SURVIVAL

a. Get to a village you know to be friendly as soon as possible. Avoid all others except as a last resort. It is difficult for a person unfamiliar with the jungle to live in it without native assistance.
(1) When requesting native assistance:

(a) Show yourself and let the natives approach you.

(b) Deal with recognized headman.

(c) Do not approach groups.

(d) Do not display weapons.

(e) Do not risk being discovered by children.

(f) Treat natives well. There is much you can learn from them.

(g) Respect local customs and manners.

(h) Learn all you can about woodcraft.

(i) Take their advice on local hazards.

(j) Never approach a woman.

(2) Before entering any strange village, whether it is friendly or not, conceal your weapons. If it is an enemy village, weapons will be taken from you. If it is a friendly village, you can always go back and get them.

b. Many of the jungle diseases are insect-borne. Use insect repellent freely, if available. Poisonous reptiles and large mammals of the jungle will cause few problems. Given a chance, they will avoid you. Take time to repair your clothes. It helps to prevent insect bites and further tearing of clothes. Examine your surroundings carefully. Many of your needs are there. Thorns broken from bamboo or trees can be used for needles. Strips of vines can be made into thread. If you need rope, vines will do. Your food and shelter; in fact, your life may depend on your ability to make use of things that are all around you. Be careful. Do not use trees and vines to pull yourself up hills as thorns, ants, scorpions, etc., will be encountered and make sores that may become infected. Use a walking stick to push aside vines and bushes.

c. If a survival kit is available most articles are self-explanatory. Some have multiple uses. The waterproof adhesive tape can be used for temporary repairs to clothing and mosquito nets as well as covering body wounds. Fish line can be used for snares. Three fish hooks, their shafts tied together with their hooks pointing out, can be used on the fish line to snare fish, crabs, etc. Head nets can be used as fish nets and snares. A fish hook fastened to a length of line; baited with fish or meat and left on the sea shore or in a field may be used to catch birds.

59. SHELTER

a. Pick a high spot when making camp. Avoid dry river beds, dead trees, and ant nests. Avoid bat caves; droppings may cause rables.
b. Types of Jungle Shelters:

(1) A simple parachute shelter can be made by draping a parachute over a rope or vine stretched between two trees.

(2) A thatched shelter (see figure 91) can be made by covering an A-type framework with a good thickness of palm or other leaves, pieces of bark, or mats of grass. Slant the thatch shingle fashion from the bottom upward. This shelter is considered ideal since it can be made completely waterproof. After you finish your shelter, dig a small drainage ditch just outside its lane and leading downhill; it will keep the floor dry.

c. Don't sleep on the ground. Use a hammock if you have one, or make one from your poncho or all purpose net. You can also make yourself a bed of bamboo or small branches covered with palm leaves (see figure 92). A parachute hammock may serve the purpose. You can make a crude cover from tree branches or ferns; even the bark from a dead tree is better than nothing.

60. WATER

a. Water is more important than food. If you have no water, do not eat. Check all drinking water for leeches and other small aquatic animals.

b. Many vines have water in them. The vine should be cut through. When a nick is cut in the vine about 1 meter above the original cut a potable liquid will drip out (see figure 93). Do not apply vine to lips. Avoid any vine, plant, or tree with milky juice for many are poisonous. Water can be found at the base of the leaves of palms; or in sections of dead bamboo (see figure 94). A section of bamboo placed against a tree will collect water during rain. Moisture collects under leaves in the dry season. Rub these with a cloth or other absorbent material, squeeze it into a container. At the seashore, brackish but drinkable water can be procured by digging a hole 3 meters above the high-tide line.

c. If water is scarce, travel during coolest part of day or at night. Rest during the heat of the day. By doing this, the water content of the body is conserved. (See survival time chart, figure 95.)

61. FOOD

a. There is food in the jungle if you know where to find it. Plan one good meal each day but nibble on any food that you may have or can find. Eat strange food in small quantities and wait for a reaction. Avoid all mushrooms. There is little nutritional value in them and much danger. In villages, eat only hot food. When cold food cannot be avoided, take an anti-dysentery pill. All vegetables or fruit procured in a village or handled by natives should be peeled.
Figure 91. A-type framework.

Figure 92. Bamboo bed.
Figure 93. Extracting water from vines.

Figure 94. Bamboo joints contain water.
Figure 95. Survival time chart.
b. Possession of a knife is vital for successful foraging. If you do not have one, a serviceable blade can be made from split bamboo. Split dry bamboo with a stone, break out a piece, sharpen on a stone, fire harden, and resharpen. The result will be a crude but effective tool or weapon.

c. Grasshoppers, ant eggs, hairless caterpillars, larvae, and termites are good when cooked. Remove heads, skin, and intestines of snakes, rats, mice, frogs, and lizards, before cooking. Bats can be caught in caves by flailing the air through which they are flying with a multi-branched stick. Inasmuch as bats are carriers of hydrophobia, do not get bitten. Avoid all cone snails and boring insects; some have poisonous stings that can be fatal.

d. Indiscriminate placing of traps is a waste of time. Small game such as rabbits or mice, travel on paths through the vegetation. Set traps in or over these trails. A serpentine fence will guide certain birds, like pheasants and some larger animals, to your traps. Cut or collect brush for the fence and build it at least .61 meters high. Place traps in depth of curve (figures 96, 97, and 98).

e. There is no rule to determine edible fish. Avoid all strange or oddly shaped fish. Only those mussels, clams, oysters, etc., that are found underwater at low tide are safe. Saltwater fish and shellfish can be safely eaten raw. Do not eat the eggs or intestines of any fish. Saltwater snails come in all sizes and shapes. All are good to eat. Never eat fresh water fish without cooking; or when the flesh is soft or the eye sunken, for they are undoubtedly diseased. Fish are attracted to light. If the area is safe, use torches at night to attract fish. A head net made in a circular form by threading with bamboo or strung on a crotched stick will make a dip net. Fish in ponds or at the edge of the beach can be driven into the shallows by flailing the water with hands or brush. Clean fish immediately when caught. If you are in a group, work together to drive the fish and net them. Help each other. Do not try to preserve meat or fish for any length of time. In the tropics, flesh of any kind spoils rapidly unless dried or smoked (figures 99 and 100).

f. Plant Foods: Cook all plants before eating. To eliminate bitterness in plants boil in two or more changes of water. The jungle natives of Southeast Asia use the slash-and-burn method of farming and move their villages frequently, leaving many formerly cultivated areas throughout the jungle. Among the most common edible plants and fruits are coconut, banana, plaintain, and papaya.

g. Fire: Keep your fire small. In the rainy season or in damp jungles, dry fuel may be difficult to obtain. Carry dry tinder with you to assist in starting your fire. By cutting away the wet outer cover of a sound log, dry fuel can be obtained. Shave dry wood or dead bamboo into thin slivers and stack in tent formation over tinder.
Figure 96. A simple deadfall using a figure 4 trigger.

Figure 97. Hanging snares.

Figure 98. Fixed snares.
Figure 99. Improvised books and lines.

Figure 100. Skewer hook.
Pile heavier fuel around fire and add slowly until fire is well started. If fuel is damp, stack it close to fire to dry out. If the jungle floor is flooded or may become so, build your fire on a hearth of stones or wet wood. If necessary, build a shelter over the fire to protect it from the rain. If the weather gets cold and you need a fire for survival, build a screen on the opposite side of the fire from you to reflect the heat toward you. A screen of leaves or branches 1 meter square tied together with fish line or vines will do the job. Tilt the screen with the top toward you. Fibrous material soaked in insect repellent makes good tinder.

h. Cooking: If large game has been killed, the stomach or skin can be made into a cooking vessel after being cleaned. Fasten three strings into holes made in the top wall of the open stomach or skin pouch and tie to the apex of a tripod made of sticks. Fill with water and bring to boiling point by putting in fire-heated stones. If sticks are not available and if the ground is not too wet or stony, the skin or stomach pouch can be used as a liner for a hole in the ground. Then fill with water and place fire-heated stones in it. Meat and fish can be stuck onto a sharpened green stick and roasted over a fire. Small animals and birds can be roasted easily. Draw and skin them and wrap in leaves, clay, or mud. Bury them in a pit, the bottom of which is lined with heated stones. Fill pit with dirt. In the morning when the pit is opened, you will find the meat well cooked and hot. Larger game can be prepared the same way by cutting into small pieces (figures 101 and 102).
Figure 101. Pit fire.

Figure 102. Simple crane.
CHAPTER 10
TROPICAL SANITATION AND HYGIENE

63. DEFINITIONS

a. Sanitation is the effective use of measures to maintain healthful environmental conditions. Among these measures are safeguarding food and water, and the control of disease-bearing insects and rodents.

b. Hygiene is practices used by the individual which will keep him healthy. Among these measures are proper eating, body cleanliness, and avoiding known sources of disease. Personal hygiene is extremely important. If you have a survival kit; directions for the use of drugs are printed on the container.

c. Communicable disease is a disease, the causative agent of which may pass or be carried from one person to another, or from one animal to man.

d. A vector is a carrier, especially an animal (usually an insect), which transfers infection from one person to another, or from one animal to man.

64. ILLNESSES.

Illness is as much a casualty producer as a high velocity missile. Maintaining good health within a command is the commander's highest responsibility. He must enforce the practices of sanitation and hygiene within his command. Strict enforcement of these rules will interrupt the chain of transmission of disease by breaking one of the links in the chain. The three links in the chain are:

a. The source which may be a case, carrier, or animal. A case is one who is actually ill with the disease; a carrier is one who harbors infection without actually being ill himself. Many animals can also harbor infections which will affect man.

b. The vehicle, or method of transmission, may be by direct contact with an infected case or carrier; or indirect contact via insects, food and water, air, or fomites. Fomites are objects which have become contaminated with infective organisms and include bed linen, clothing, utensils, etc.

c. The susceptible individual who is an individual without immunity, or resistance, to an infecting organism. Immunity may be natural by having had the disease or artificial by having had an injection or swallowing vaccine produced from killed or weakened organisms.

65. CATEGORIES OF DISEASE

a. Respiratory diseases include the common cold, influenza, smallpox, diphtheria, meningitis, and tuberculosis. The most important of these in Vietnam is
tuberculosis. The best protection against this disease is the maintenance of good living habits. Intestinal tuberculosis and tuberculosis of the skin can be acquired by drinking unpasteurized milk, or eating dairy foods (cheese, butter, ice cream, etc.) made from unpasteurized milk.

b. Intestinal diseases include typhoid fever, amoebic and bacterial dysentery, cholera, food poisoning, and various parasitic infections. These are all spread through food and water, contaminated with feces or urine from an infected case or carrier. To protect yourself, eat nothing which has not been thoroughly cooked; drink no water which has not been disinfected or boiled. Salad vegetables should be scalded by immersing them in boiling water for 10 seconds or by disinfecting them in chlorine disinfectant solution for 30 minutes. One package of "Disinfectant, Chlorine, Food Service" dissolved in 10 gallons of water provides a good disinfectant for this purpose. Some disease organisms are resistant to chlorine. Among these are the cysts of amoebae which produce amoebic dysentery and certain liver flukes. The flukes are acquired by eating the flesh of raw, smoked, or pickled fish. Eat only fish which has been thoroughly cooked.

66. SOURCES OF INFECTION AND DISEASE

a. Water can be the vehicle of infection for hepatitis, typhoid fever, cholera, dysentery, and many of the parasites. No water in Vietnam can be consumed in safety unless boiled or disinfected with chlorine or iodine. Water used to make ice should be treated in the same manner. Two ampules of calcium hypochlorite per 36-gallon Lyster Bag or two iodine tablets (1 if water is clear) per canteen of water provides sufficient chlorine to disinfect water. Permit the water to stand for 30 minutes before drinking. Water for bathing should also be purified to avoid leptospirosis.

b. Insect-borne diseases include malaria, dengue fever, encephalitis, scrub typhus, and plague. The antimalarial tablet, taken faithfully once a week, will prevent malaria. The standard U.S. Army insect repellent, mosquito nets, and impregnated clothing are other individual measures which can be taken to avoid other insect-borne diseases.

c. The deep fungus infections can be prevented by proper use of protective clothing and by immediate first aid treatment of even the most minor injuries (see appendix 4, First Aid). Superficial infections, such as "jock-itch" and athlete's foot can be prevented by faithful cleaning and drying of armpits, groin, and feet. Also, frequent changes of clothing and socks and the application of Desenex foot powder to these areas are helpful preventive measures.
d. **Venereal diseases** include syphilis, gonorrhea, chancre, and lymphogranuloma inguinale and venereum. All are transmitted through intercourse, though syphilis can also be acquired by kissing. Individual prophylaxis includes using a condom, urinating, and washing the genitalia after intercourse. If you suspect that you have acquired an infection, don’t delay treatment; obtain your treatment from U.S. Army personnel. Tuberculosis and other nonvenereal diseases can be acquired through intimate contact.

e. **Venomous snakes, leeches, and predatory animals** represent animals of minor medical importance. Antivenom is the only satisfactory treatment for snakebite. Treat all snake bites as poisonous. (See appendix 4, First Aid.) Leech bites should be treated as any other minor wound. Animal bites from predatory animals should be treated as if the animal is known to be rabid. If the animal escapes, so that examination of the head for rabies cannot be accomplished, treatment against rabies should be started immediately. This applies to domestic animals also.

f. **Nutritional diseases**, prevalent in Vietnam, include beriberi (from vitamin B deficiency), vitamin A deficiency, and goiter. It is unlikely that you will be exposed to a deficient diet long enough to acquire these diseases. Fresh vegetables are an important source of vitamin A and B. Unpolished rice is preferable to polished rice because of its high vitamin B content.

67. **TIPS ON HYGIENE AND HEALTH**

a. Treat wounds or sores as soon as possible.

1. To stop bleeding when you have no bandages, apply freshly made spider webs to assist in the coagulation of the blood.

2. In the absence of toilet paper, use leaves and grasses. Be careful to examine the leaves and grasses for insects. Use no leaves that have fuzzy or hairy surfaces taken from a tree or plant with milky sap, or grass that has a serrated edge. Do not use material that is laying on the ground.

3. Leeches and ticks can be partially avoided by tying cuffs of your jacket at the wrist and the bottoms of trouser legs outside the boots and applying insect repellent to all openings. Check your clothes and body frequently. Remove leeches and ticks carefully. If pulled off quickly, they may leave their heads in the bite; infection will result. Wet salt, fire, or lime juice will cause them to withdraw their heads and fall off. Don’t hurry the process.

4. In case of heat stroke, heat exhaustion, or heat cramps lower the body temperature by drenching with water or covering the body with wet clothing. Dissolve two salt pills in the equivalent of a cup of water and drink. Rest until all
Symptoms have passed. Avoid sunburn. Even a short time in the jungle will reduce your resistance to the sun. Serious infection can result from over-exposure. Keep covered; do not risk a painful, dangerous burn.

(5) In cases of diarrhea when no drugs are available, a tea made from boiled guava leaves or charcoal eaten with hot water will be beneficial.

(6) Apply hot pads to bring boils to a head.

(7) Use tourniquet, for bleeding, only after everything else fails.

(8) Most important of all, keep your head dry, try not to get too tired, rest frequently, be careful, and do not give up.

Figure 103. Shower unit, using 55-gallon drum.
Figure 104. Handwashing device, using 5-gallon water cans.

Figure 105. Pipe urinal arrangement.
Figure 106. Straddle trench latrines for 100 men, with handwashing device.
APPENDIX I
OTHER USEFUL DATA

68. POINTS TO REMEMBER

a. Corps tactical zones (CTZ) report to Joint General Staff (JGS). Corps troops may include:

   1. Divisions (only infantry in ARVN).
   2. Separate infantry regiment.
   3. Engineer groups (which may be directly under JGS).
   5. Ranger Battalions (unless attached to divisions).
   6. Armored cavalry squadrons.

b. Each province in the division tactical area (DTA) is a subordinate military sector; province chief is also the sector commander. Sector operations and intelligence center (SOIC) reports to the division or special zone tactical operations center (TOC). Sector is authorized a regional forces battalion consisting of a headquarters, an administrative and logistical company, and a number of rifle companies depending on the local situation. Sectors in the Mekong Delta area are authorized boat platoons, augmented to form boat companies consisting of eight LCVP’s. Some provinces have popular forces training centers.

c. Each district in a province is a subsector military command. District chief’s organic troops are the popular forces; additionally, he may have operational control of one or more regional forces companies. An artillery platoon may be positioned at the district headquarters.

d. MACV chain of command parallels Vietnamese chain of command.

   1. MACV commands and has operational control of support organization.
   2. Missions of support organizations are to administer support to MACV elements and command U.S. Army troop units in Republic of Vietnam. A Marine helicopter squadron operates in I Corps. Second Air Division supports Vietnamese tactical concept for Vietnamese Air Force. Special Forces in Republic of Vietnam are training Vietnamese personnel to defend their villages.
   3. MACV is primarily interested in administration, organization, training, and logistics.
(4) Field detachments are subordinate to MACV.

(5) Division detachments found in division advisory team.

(a) Detachments to division units:
1. Regiment.
2. Battalion.
3. Support companies.

(b) Sector:
1. Sector advisor.
2. Sector intelligence advisor.
3. Intelligence NCO.
4. Civil guard advisor.
5. SCD advisor (if there is an SCD training center in the province).

69. TIPS TO ADVISORS

a. Professional Duties and Interests:

(1) Sell in-place training once units return to posts. One thousand-inch (approximately 25 meters) firing ranges are ideal for small posts to fire weapons.

(2) Spend a maximum time in your units so that the troops get to know and trust you. Keep abreast of what is going on in the unit, and keep in close contact with the commander and staff.

(3) Encourage frequent command inspections by the commander. Many often show a reluctance to inspect, relying solely on correspondence and reports to evaluate the effectiveness of the unit.

(4) Continually stress mutual advantages of good military-civilian relations to avoid pitfalls of military arrogance, which easily irritates the civilian populace. The development of a proper soldier-civilian relationship is civic action at its best.

(5) Constantly strive to raise the standards of your unit to your standards. Guard against lowering your standards to those of the unit you advise.

(6) Keep training standards high enough so that the unit is ready for an inspection at all times. This saves the wear and tear of preparation for inspection and the disappointment that follows when it’s cancelled. Do not use training time for
housekeeping matters; discourage the idea that the two of you can conspire to "eyewash" instructors.

(7) MACV advisors should have sufficient knowledge of all aspects of U.S. aid programs to counter insurgent propaganda depicting this aid as interference in the affairs of the people.

(8) Constantly observe for signs of fatigue. There is a marked difference between American and Vietnamese stamina. Pushing at peak performance will cause a long-term decrease in efficiency.

b. Techniques:

(1) An advisor must constantly bear in mind that he is an advisor and not a commander. He is not in Vietnam to fight or to lead troops.

(2) Avoid rushing your acceptance by your counterpart. Overselling yourself will arouse suspicion and delay acceptance. Time spent developing a healthy relationship will pay large dividends later on.

(3) Advising works both ways. Set an example for your counterpart by asking his advice; you will get many good ideas from him.

(4) Avoid giving your counterpart the impression that each time he sees you, you are interested in asking for status reports, etc. You will soon find him avoiding you and information increasingly difficult to get.

(5) Transact important business directly with your counterpart to assure full understanding of difficult subjects. Work from the soft sell to the request for official information.

(6) Don't present too many subjects at one time or prolong unnecessary discussion of one subject; it is better to have another conference at a later time. Don't speak rapidly or use slang. By the same token, don't speak too slowly; it will insult his intelligence.

(7) Correct the most important deficiencies first. When you arrive you will see many things you will want to correct immediately. At all costs avoid the impression that everything is all wrong. In some cases it may take a month or more to sell one idea.

(8) Avoid making recommendations that lead to decisions. Leave sufficient room for your counterpart to exercise his prerogative. One of his greatest fears is that he will appear dependent upon his advisor to his troops. Carefully choose a time and a place to offer advice.
(9) Use your subordinate advisors to lay the groundwork for new ideas at their level.

(10) For successful combat operations do your homework thoroughly. The amount of advising done during combat operations is small. The advisor does most of his advising in preparation for combat, basing his advice upon his observations or those of his subordinates during past operations. Hold a private critique with the commander upon completion of an operation.

(11) Don't be afraid to advise against a bad decision, but do it in the same manner you would recommend a change of action to an American commander for whom you have respect and with whom you work daily.

(12) Approach the subject under discussion from different directions and with different words, until you know that your ideas are understood. The Vietnamese seldom admit that they do not understand. Don't accept a yes answer at its face value; yes may mean that the person understands but does not mean that he buys your suggestion. It may also be used to cover a failure to understand.

(13) Always exercise patience in your dealings with your Vietnamese counterpart. Never expect the job to be done at the snap of a finger—and don't snap your fingers.

(14) Information from your counterpart cannot be accepted in blind faith. It must be checked discreetly and diplomatically, but checked!!

(15) After planting an idea, let the Vietnamese take credit for it as if it were his own idea.

(16) Advisors are transient—especially infantry battalion advisors. Try to learn what your predecessor had attempted and has or has not accomplished. Ask him for his files. Debrief him if you have the chance.

(17) Begin preparing a folder about your advisory area and your duties as soon as you report on the job. By posting a worksheet-type folder during your tour, you will better understand your job and your successor will have a complete file to assist him in carrying out projects you initiate.

(18) Your supervisor at the next higher echelon will often be unable to visit you. He will travel with his counterpart and not get a good chance to talk with you. Your efficiency report will probably be based largely on your reports. Consider writing at least on a weekly basis to your chief. Tell him what your area is like, what are trying to do, what you have been able to accomplish, what you need his help on at his level. Send him copies of advisory recommendations. Write up ideas you
have for winning the war or any part of it. Your writings may give people a better idea of what kind of job you are doing. You might come up with a key solution to a problem.

(19) Take time to brief supporting pilots. Take helicopter pilots along on command visits. Try to get helicopter and observation pilots included at operations briefings. Pilots are branch qualified officers and warrant officers; they are more effective when they know the overall situation. They are less apt to complain about how they are being used when they are fully briefed on your plans.

(20) Use proper radio procedure. Your division advisory team publishes its own SSI and SOI. Remember that much advisory FM radio traffic is air-ground communication. The Viet Cong are capable of intercept!

c. Personal Attitude and Relations:

(1) Getting accustomed to the native food and drink presents a problem in somewhat varying degrees to the advisor. You will not lose face if you eat and drink with your counterpart; conversely, you will gain face.

(2) Don't become discouraged. All of your advice won't be accepted. Some of it will be implemented at a later date.

(3) Don't forget that a careless word or action can cost the United States dearly in good will and cooperation, which have been built up with great effort and at considerable cost.

(4) Don't discuss Vietnamese policy with Vietnamese personnel. It is your obligation to support the incumbent government just as you do your own. This is U.S. national policy.

(5) Study your counterpart to determine his personality and background, exert every effort to establish and maintain friendly relationships. Learn something about the personal life of the Vietnamese with whom you work and demonstrate this interest.

(6) Set a good example for the Vietnamese in dress, posture, and conduct as well as in professional knowledge and competence.

(7) Emphasize the importance of doing things on time by being punctual yourself. Many Vietnamese have a very casual attitude toward time.

(8) Develop a sense of responsibility toward the unit being advised to the
degree that you feel a personal gratification for a job well done. Do not become so involved with the unit that you cannot readily recognize failures.

(9) Accept invitations to Vietnamese dinners, cocktail parties, and ceremonies. Shake hands with all Vietnamese in a room when entering and leaving. Exchange amenities with officials before discussing business matters.

(10) Don't summon a Vietnamese by whistling or shouting. You will note that Vietnamese summon each other by a wave of the hand, similar to our farewell wave.

(11) Don't fail to observe and recognize military courtesy.

d. Personal Qualities and Requirements:

(1) Based upon observation and experience, U.S. advisors returning from the Republic of Vietnam have pooled their thoughts on what it takes to be an effective advisor. No doubt each one of us is most anxious to do our best in assisting our Vietnamese allies expel insurgency from their country as soon as possible. For this reason we feel that you will welcome the opportunity to examine what other advisors have said on the subject of advising. Give these comments consideration and, to the extent indicated by introspection, make them a part of your personal attributes before and during your tour in Vietnam. These qualities and requirements, along with a general summation of desirable advisor traits, are set forth in the following paragraphs:

(a) Persevere in implementing sound advice; exercise patience and tact; display a pleasing personality; be adaptable to environment and changing situations; be honest; maintain high moral standards; be understanding and sincere; present a sharp military appearance; evince devotion to job assignment; keep in good physical condition; acquire ability to demonstrate effectively; know your job; know thoroughly the unit you are advising as to organization, equipment, and tactics; know thoroughly your own branch and have a good working knowledge of other branches; know your counterpart's problems; and demonstrate your awareness of them to him.

(b) Advisors are restricted in their operations because they are not authorized to exercise command in accomplishing advisory functions. They must rely on their ability to sell the most indefinite commodity which is represented in the individual himself. The traits of an advisor encompasses all the traits of leadership plus the ability to adapt to his environment. This environment changes with the locality or area in which the advisor is assigned. In the Far East, he must remember that arrogance and dogmatism are all the more taboo, for the religious and philosophical background of the Asian strongly opposes this type of
personality. To sell one's self, you must prove your value—an advisor must present a favorable personality in the eyes of his counterpart. This can be accomplished in due time by a gradual demonstration of your capabilities in an unassuming but firm manner. Be positive but not dogmatic in your approach to any subject; however, if you are not sure of the subject matter, it is better to say so and take timely measures to obtain the correct information. To attempt to bluff through a problem will only result in irreparable loss of prestige.

(c) A most favorable trait is persistence, tempered with patience. If a problem area is discovered, continue efforts to solve it, recommend appropriate measures to be taken, and then follow through; again, remembering that patience is of utmost importance. But, the matter must be continually brought to your counterpart's attention until he is sold on taking the measures necessary to solve the problem or correct the deficiency as the case may be. The ultimate in good advising is to advise your counterpart in such a way that he takes the desired action feeling that it was through his own initiative rather than yours.

(d) Possibly the most desirable traits that you can possess as an advisor are knowledge of the subject, ability to demonstrate your capabilities in an unassuming but convincing manner, and a clear indication of your desire to get along and work together with your counterpart and other associates; however, not to the extent of obsequious behavior nor acceptance of abusive treatment. These traits, along with leadership ability and desirable character traits accepted in our own society, will usually lead to a successful and satisfying advisory tour.

e. Helpful Hints for Personnel Security. (Comments by former Mafa students.)

(1) "If living in a U.S. compound, always provide some security of your own."

(2) "Always sandbag your jeep. Also lock the hood down to help prevent 'bugging' your vehicle. You can use a chain and padlock. Check the vehicle before using."

(3) "Try not to wear white (U.S.) insignia on operations. Carry the same weapons and equipment as the Vietnamese. The VC can almost always pick out the Americans even at great range because of size. The VC will kill Americans first, if they can; snipers especially."

(4) "If you have only one route to and from work in the combat area, vary the times you go to and from work. Also vary the speed, always accelerate and decelerate when driving on a road in the combat area."
(5) "Always drink as much water as possible during the dry season. When you come to a new source of good water, drink as much as you can, even though you might just have had a drink; then fill up your canteens."

(6) "Always carry the following as a minimum for physical well-being on patrols: (1) vitamins; (2) salt tablets; (3) bouillon cubes; (4) merthiolate to put on small cuts instantly to stop infection; (5) oil and patches for weapons; and (6) during the wet monsoon season, carry an oily cloth so that during the day you can continually wipe your weapon clean to prevent instant rust.

(7) "Everyone must have an individual ditch (foxhole) and a zone of defense."

(8) "Just recently we had a young advisor killed and another wounded. Both of these people were with the lead element of their group. I have yet to see my counterpart lead any operation. When we go out on a search and clear mission, we have security to the front, both flanks, and to the rear. My own personnel feelings are that if you get carried away and start leading the attack, you have done your counterpart a great injustice when you get hit. For one thing, you are wounded, you are a liability, and you can offer no assistance nor advice."

(9) "Check your personal items before using."

(10) "Wardrobes, drawers, and suitcases must be locked."

(11) "The distance from the fence to your camp should be sufficient to protect you from a handgrenade (50 meters) and must be clear."

(12) "Don’t walk too closely to the radio operator."

(13) "Don’t swing the map or binoculars in your hand."

(14) "Should have a Special Forces emergency kit."

(15) "Don’t wear a black uniform at night."

(16) "Don’t do anything that has not been done by the others."

(17) "Try to use the footsteps already made by others."

(18) "Try to carry as light a load as possible."

(19) "Always test-fire a full magazine from your weapon before departing on an operation."

(20) "Don’t release mine or boobytrap by yourself; mark it, and let your counterpart know about it—that’s enough."
"Don't worry about the food when you go to the field. Your counterpart will take care of you."

DON'T SET A PATTERN!!!

f. Helpful Hints for Unit Security: (Comments by former MATA students.)

(1) "On the tactical side, never, never travel in a single column. You will either make no contact or you'll be ambused. When communication is difficult and the terrain is rugged, a single column is the easiest way to move and control a unit. It's also the easiest way to lose it."

(2) "Do not have films developed (pictures taken by advisors) at local photo shops. Advisors, following the normal American custom of being a camera bug, photograph everything including ARVN compounds portraying the complete defense setup. These photos serve as a tremendous source of intelligence for the VC."

(3) "When on dismounted operations, stay off roads."

(4) "Establish temporary bivouac after dark only (especially important for small units). Don't sleep where you cook."

(5) "When on operations always keep at least one-third of all U.S. personnel awake during hours of darkness. Have them check the perimeter at irregular intervals."

(6) "When on patrol spread the U.S. personnel out among the units on patrol. Make sure you always have at least one NCO or officer with the lead unit to keep you informed of the situation."

(7) "Advise your counterpart to make sure that no guard knows 'ahead of time' which guard post he will occupy. This could prevent an 'inside job.'"

(8) "Have the Vietnamese commander conduct frequent stand-to alerts for his unit, camp, hamlet, etc. This will give a good indication of the time required for reaction in the event of an attack; and it is also a good time to fire concentrations, barrages, and test-fire crew-served weapons."

(9) "Periodically review FM 21-75, Combat Training of the Individual Soldier and Patrolling."

(10) "Change the defensive posture of your command frequently. VC study this before attacking and have been known to 'call off' an attack on even the slightest indication of change."

(11) "Do not let anyone know your itinerary. Keep a long distance between your car and another car. Take the canvas covers off all vehicles if possible. During the night, suggest you use one light and low beam."
(12) "Constantly check the PF troops to see that they are where they are supposed to be. Many times they will just pack up and leave, especially at mealtime."

(13) Helpful Miscellaneous Hints: (Comments by former MATA students.)

(1) "On a recent operation to the most distant district outpost, we were preparing to depart for home station when we received an intelligence report that the VC had prepared very extensive ambushes on our route. When posted to my map, I saw that we were more or less surrounded. I made some suggestions as to how to counter this superior force. This is what my counterpart did: He briefed his leaders; we started out and he transmitted a false order to go to a certain destination knowing the VC had a USOM radio and would monitor; the VC shifted their major force, and we skirted right end and were only fired at by 'local boys' on the trip back. No casualties. This, incidentally, was a pacification operation and we had about two platoons for security."

(2) "Coordination with chopper pilots is a must for a battalion team. Most of the pilots don't have the current SOL. Also, they must switch back and forth from what they call their 'flight-following' frequency to the air-ground frequency. It's rather frustrating when they forget and you try like hell to contact them on the air-ground frequency. We operated down in Binh Lam Special Zone. The choppers came from III Corps area. They had no idea what the 23rd Division call signs were. A small point, maybe, but still important."

(3) "A program has been initiated in Dariac to reduce the excessive number of weapons surrendered to the VC without a fight. An impressive ceremony was conducted 2 January at Buon Ho to encourage combat youth and popular forces to resist VC entry. Their primary fear is lack of assistance from ARVN. Political and pep talks were given by the province chief and the commanding general. All weapons were collected and the militia were sworn to fight to the death before giving up their weapons. This program is continuing throughout the province."

(4) "You should normally charge a small ambush. The enemy has selected his position and already picked his kill zone, so you must get out of it as quickly as possible. To retreat would normally make you vulnerable to his blocking force, so do the unexpected--charge! However, the best solution is don't get ambushed."

(5) "When in the jungle, keep off the trails, move through the jungle properly, and move in at least two supported columns."

(6) "Due to the influence of both the U.S. and the French, the leaders in Vietnam have a tendency to select objectives in sweep and clear operations. If this
Is done. the subordinate leaders will not, repeat, will not deviate from their line of march to fight the VC within the area. It's not because they lack courage, but rather because they head for the 'goose egg' that has been drawn on their map by their leader. Whenever possible, advise your counterpart to include zones of actions in his operation plan. Instead of objectives, have him include checkpoints and phase lines as control measures.

(7) "Train all officers to adjust artillery. This regiment has trained not only its own officers and NCO's, but all regional force and popular force officers in our area. The training paid off last week when two main force companies attacked a platoon guarding a bridge and were repulsed after a 4-hour fight, largely because artillery time-fire was brought in and properly adjusted over the position. Incidentally, overhead protection for such posts is very necessary but rarely exists. We've even gone so far as to have all villages dig protective shelters with overhead cover because, of late, the VC have been setting up their mortars in villages, which has made them immune to counterbattery fire."

(8) "Decentralize operations. This requires some selling but it's worth the effort. The lower the level of command, down to regiment anyway, the better the intelligence; because in many cases the commanders on the ground can't reveal the source of their information for fear word will leak out and the source will lose his head. Since sources cannot be evaluated, higher levels of command frequently discount many of the valid reports they receive. Also, centralized control greatly increases reaction time, particularly in the mountains where communication is difficult."

(9) "Be careful passing through gates and crossing fences in VC areas; these are likely mine and boobytrap areas."

(10) "An excellent tactic to use is that of sending a company or two through a VC village and follow up 3 hours later with one or two platoons. After the first element has passed, the VC come out of their hiding places and you'll then catch them by surprise."

(11) "I think one of the most important points that I can make is, the officers and NCO's coming over here must remember that they are advisors. They are not coming to Vietnam to be a point man in a patrol, and they are not here to lead a platoon in an attack. This is one of the easiest ways I know of to come home 'quartermaster style,' in a pine box."

(12) "When filling in VC trenches, put one grenade in the trench, cover it, and let some villager casually see you do it. Then tell the villager you have mined the trenches. After you leave (if you leave), the VC will come back and work all night looking for mines you haven't even put there. Also, it will take them a long time to redig the trenches."
<table>
<thead>
<tr>
<th>Conversion</th>
<th>Multiply</th>
<th>By</th>
<th>To Obtain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres</td>
<td>.405</td>
<td></td>
<td>Hectares</td>
</tr>
<tr>
<td>Caliber</td>
<td>25.4</td>
<td></td>
<td>Millimeter</td>
</tr>
<tr>
<td>Centimeters</td>
<td>.3937</td>
<td></td>
<td>Inches</td>
</tr>
<tr>
<td>Degrees</td>
<td>17.8</td>
<td></td>
<td>Mils</td>
</tr>
<tr>
<td>Fathoms</td>
<td>6</td>
<td></td>
<td>Feet</td>
</tr>
<tr>
<td>Feet</td>
<td>.1667</td>
<td></td>
<td>Fathoms</td>
</tr>
<tr>
<td>Gallons US</td>
<td>3.785</td>
<td></td>
<td>Liters</td>
</tr>
<tr>
<td>Grains</td>
<td>.00228</td>
<td></td>
<td>Ounces</td>
</tr>
<tr>
<td>Grams</td>
<td>.03527</td>
<td></td>
<td>Ounces</td>
</tr>
<tr>
<td>Hectares</td>
<td>2.471</td>
<td></td>
<td>Acres</td>
</tr>
<tr>
<td>Inches</td>
<td>2.54</td>
<td></td>
<td>Centimeters</td>
</tr>
<tr>
<td>Kilograms</td>
<td>2.2</td>
<td></td>
<td>Pounds</td>
</tr>
<tr>
<td>Kilometers</td>
<td>.6214</td>
<td></td>
<td>Miles</td>
</tr>
<tr>
<td>Knots</td>
<td>1.152</td>
<td></td>
<td>Miles per hour</td>
</tr>
<tr>
<td>Liters</td>
<td>.2642</td>
<td></td>
<td>Gallons US</td>
</tr>
<tr>
<td>Meters</td>
<td>1.094</td>
<td></td>
<td>Yards</td>
</tr>
<tr>
<td>Miles</td>
<td>1.609</td>
<td></td>
<td>Kilometers</td>
</tr>
<tr>
<td>Miles per hour</td>
<td>.8684</td>
<td></td>
<td>Knots</td>
</tr>
<tr>
<td>Millimeter</td>
<td>.0394</td>
<td></td>
<td>Caliber</td>
</tr>
<tr>
<td>Mils</td>
<td>.056</td>
<td></td>
<td>Degrees</td>
</tr>
<tr>
<td>Ounces</td>
<td>437.5</td>
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<td>Grains</td>
</tr>
<tr>
<td>Ounces</td>
<td>28.35</td>
<td></td>
<td>Grams</td>
</tr>
<tr>
<td>Pounds</td>
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<td></td>
<td>Kilograms</td>
</tr>
<tr>
<td>Temperature (C) - 17.8</td>
<td>1.8</td>
<td></td>
<td>Temperature (F)</td>
</tr>
<tr>
<td>Temperature (F) - 32</td>
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<td></td>
<td>Temperature (C)</td>
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<tr>
<td>Yards</td>
<td>.9144</td>
<td></td>
<td>Meters</td>
</tr>
</tbody>
</table>

Table XXXIII
221
Determination Scale:

Flying Height Method:

\[
\text{Scale} = \frac{F}{H} \quad (\text{Focal length of camera in inches}) \\
H \quad (\text{Altitude above ground in inches})
\]

Map Distance Method:

\[
\text{Scale} = \frac{FD}{GD} \quad (\text{Photo distance in inches}) \\
GD \quad (\text{Map distance in inches})
\]

Point Designation Grid System:

1. Turn photo so that written data is in normal resting position.

2. Draw lines across photo joining opposite fiducial (collimating) marks.

3. Space grid lines, starting with center lines, a distance equal to 4 cm or 1.576 inches apart.

4. Number each center line 50 and give numerical values to the other lines, increasing right and up.

5. Read coordinates as any other.
<table>
<thead>
<tr>
<th>PRINCIPLES OF WAR</th>
<th>REPORTING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>M ass</td>
<td>S ize</td>
</tr>
<tr>
<td>O bjective</td>
<td>A ctivity</td>
</tr>
<tr>
<td>S implicity</td>
<td>L ocation</td>
</tr>
<tr>
<td>S urprise</td>
<td>U nit</td>
</tr>
<tr>
<td>C ommand</td>
<td>T ime</td>
</tr>
<tr>
<td>O ffensive</td>
<td>E quipment</td>
</tr>
<tr>
<td>M aneuver</td>
<td></td>
</tr>
<tr>
<td>E conomy of forces</td>
<td></td>
</tr>
<tr>
<td>S ecurity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TERRAIN ANALYSIS</th>
<th>PRISONERS OF WAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>C ritical</td>
<td>S earch</td>
</tr>
<tr>
<td>O bservation</td>
<td>S eperate</td>
</tr>
<tr>
<td>C over and concealment</td>
<td>S ilerce</td>
</tr>
<tr>
<td>O bstacles</td>
<td>S speed</td>
</tr>
<tr>
<td>A venues of approach &amp; withdrawal</td>
<td>S safeguarding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTELLIGENCE EVALUATION LEGEND.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
</tr>
<tr>
<td>A - Completely reliable</td>
</tr>
<tr>
<td>B - Usually reliable</td>
</tr>
<tr>
<td>C - Fairly reliable</td>
</tr>
<tr>
<td>D - Not usually reliable</td>
</tr>
<tr>
<td>E - Unreliable</td>
</tr>
<tr>
<td>F - Reliability unknown</td>
</tr>
</tbody>
</table>

This legend should be applied to intelligence originating in the field and the evaluation sent forward with the information.

Table XXXIV
223
<table>
<thead>
<tr>
<th>Name</th>
<th>Illustration</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square</td>
<td><img src="image" alt="Square Knot Illustration" /></td>
<td>Join two ropes of same size. (Will not slip, but will draw tight under strain.) To end block lashing.</td>
</tr>
<tr>
<td>Double sheet bend</td>
<td><img src="image" alt="Double Sheet Bend Illustration" /></td>
<td>Join wet ropes, of unequal size, or rope to an eye. (Will not slip or draw tight under strain.)</td>
</tr>
<tr>
<td>Bowline</td>
<td><img src="image" alt="Bowline Illustration" /></td>
<td>Form a loop. (Will not slip under strain and is easily untied.)</td>
</tr>
<tr>
<td>Timber hitch</td>
<td><img src="image" alt="Timber Hitch Illustration" /></td>
<td>Lifting or dragging heavy timbers. (Is more easily controlled if supplemented by half hitches.)</td>
</tr>
<tr>
<td>Clove hitch</td>
<td><img src="image" alt="Clove Hitch Illustration" /></td>
<td>Fasten rope to pipe, timber, or post. (It is used to start and finish all lashings and may be tied at any point in rope.)</td>
</tr>
<tr>
<td>Sheep shank</td>
<td><img src="image" alt="Sheep Shank Illustration" /></td>
<td>Shorten rope or take load off weak spot in rope.</td>
</tr>
<tr>
<td>Anchor knot</td>
<td><img src="image" alt="Anchor Knot Illustration" /></td>
<td>To fasten cable or rope to anchor.</td>
</tr>
</tbody>
</table>

Table XXXV
### Metric Conversion Tables

<table>
<thead>
<tr>
<th>Miles</th>
<th>Yards</th>
<th>Feet</th>
<th>Inches</th>
<th>Meters</th>
<th>Centimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1609</td>
<td>528</td>
<td>63.36</td>
<td>1.60</td>
<td>160.9</td>
</tr>
<tr>
<td>2</td>
<td>3218</td>
<td>1056</td>
<td>126.72</td>
<td>3.20</td>
<td>321.8</td>
</tr>
<tr>
<td>3</td>
<td>4827</td>
<td>1584</td>
<td>189.08</td>
<td>4.80</td>
<td>482.7</td>
</tr>
<tr>
<td>4</td>
<td>6436</td>
<td>2112</td>
<td>252.44</td>
<td>6.40</td>
<td>643.6</td>
</tr>
<tr>
<td>5</td>
<td>8045</td>
<td>2640</td>
<td>315.80</td>
<td>8.00</td>
<td>804.5</td>
</tr>
<tr>
<td>6</td>
<td>9654</td>
<td>3168</td>
<td>379.16</td>
<td>9.60</td>
<td>965.4</td>
</tr>
<tr>
<td>7</td>
<td>11263</td>
<td>3696</td>
<td>442.52</td>
<td>11.20</td>
<td>1126.3</td>
</tr>
<tr>
<td>8</td>
<td>12872</td>
<td>4224</td>
<td>505.88</td>
<td>12.80</td>
<td>1287.2</td>
</tr>
<tr>
<td>9</td>
<td>14481</td>
<td>4752</td>
<td>569.24</td>
<td>14.40</td>
<td>1448.1</td>
</tr>
<tr>
<td>10</td>
<td>16090</td>
<td>5280</td>
<td>632.60</td>
<td>16.00</td>
<td>1609.0</td>
</tr>
</tbody>
</table>

**Example:** 4 inches = 10.16 cm

Table XXXVII
### Linear Conversion (continued)

<table>
<thead>
<tr>
<th>One Unit (below)</th>
<th>mm (millimeters)</th>
<th>cm (centimeters)</th>
<th>meters</th>
<th>km (kilometers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equals ↓</td>
<td>1.</td>
<td>0.1</td>
<td>0.001</td>
<td>0.000001</td>
</tr>
<tr>
<td>cm (centimeters)</td>
<td>10.</td>
<td>1.</td>
<td>0.01</td>
<td>0.00001</td>
</tr>
<tr>
<td>meters</td>
<td>1000</td>
<td>100</td>
<td>1.</td>
<td>0.001</td>
</tr>
<tr>
<td>km (kilometers)</td>
<td>1000000</td>
<td>100000</td>
<td>1000</td>
<td>1.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>One Unit (below)</th>
<th>gm (grams)</th>
<th>kg (kilograms)</th>
<th>metric ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equals ↓</td>
<td>1.</td>
<td>0.001</td>
<td>0.000001</td>
</tr>
<tr>
<td>gm (grams)</td>
<td>1.</td>
<td>0.001</td>
<td>0.000001</td>
</tr>
<tr>
<td>kg (kilograms)</td>
<td>1000</td>
<td>1.</td>
<td>0.001</td>
</tr>
<tr>
<td>metric ton</td>
<td>1000000</td>
<td>1000</td>
<td>1.</td>
</tr>
</tbody>
</table>

### Units of Centimeters

<table>
<thead>
<tr>
<th>cm</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch</td>
<td>0.04</td>
<td>0.08</td>
<td>0.12</td>
<td>0.16</td>
<td>0.20</td>
<td>0.24</td>
<td>0.28</td>
<td>0.31</td>
<td>0.35</td>
<td>0.39</td>
</tr>
</tbody>
</table>

### Fractions of an Inch

<table>
<thead>
<tr>
<th>Inch</th>
<th>1/16</th>
<th>1/8</th>
<th>3/16</th>
<th>1/4</th>
<th>5/16</th>
<th>3/8</th>
<th>7/16</th>
<th>1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>cm</td>
<td>0.16</td>
<td>0.32</td>
<td>0.48</td>
<td>0.64</td>
<td>0.79</td>
<td>0.95</td>
<td>1.11</td>
<td>1.27</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Inch</th>
<th>9/16</th>
<th>5/8</th>
<th>11/16</th>
<th>3/4</th>
<th>13/16</th>
<th>7/8</th>
<th>15/16</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>cm</td>
<td>1.43</td>
<td>1.59</td>
<td>1.75</td>
<td>1.91</td>
<td>2.06</td>
<td>2.22</td>
<td>2.38</td>
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</tbody>
</table>

**Table XXXVII (II)**
## Weight Conversion - English-Metric System

<table>
<thead>
<tr>
<th></th>
<th>ounces</th>
<th>grams</th>
<th>pounds</th>
<th>kilograms</th>
<th>short ton</th>
<th>metric ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.10</td>
<td>0.91</td>
<td>2.20</td>
<td>0.45</td>
<td>0.04</td>
<td>28.4</td>
</tr>
<tr>
<td>2</td>
<td>0.20</td>
<td>1.81</td>
<td>4.41</td>
<td>0.91</td>
<td>0.07</td>
<td>56.7</td>
</tr>
<tr>
<td>3</td>
<td>0.31</td>
<td>2.72</td>
<td>6.61</td>
<td>1.36</td>
<td>0.11</td>
<td>85.0</td>
</tr>
<tr>
<td>4</td>
<td>0.41</td>
<td>3.63</td>
<td>8.82</td>
<td>1.81</td>
<td>0.14</td>
<td>113.4</td>
</tr>
<tr>
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<td>0.51</td>
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<td>0.72</td>
<td>6.35</td>
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<td>198.4</td>
</tr>
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<td>0.82</td>
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<td>3.63</td>
<td>0.28</td>
<td>226.8</td>
</tr>
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<td>0.92</td>
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<td>19.84</td>
<td>4.08</td>
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<td>9.07</td>
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<td>11.74</td>
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<td>1.51</td>
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<td>35.29</td>
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<td>1.71</td>
<td>15.31</td>
<td>37.49</td>
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<td>18</td>
<td>1.81</td>
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<td>39.69</td>
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</tr>
<tr>
<td>19</td>
<td>1.91</td>
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<td>41.88</td>
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<td>17.99</td>
<td>44.08</td>
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<td>2.11</td>
<td>18.88</td>
<td>46.28</td>
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<td></td>
</tr>
<tr>
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<td>2.21</td>
<td>19.77</td>
<td>48.48</td>
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<td></td>
</tr>
<tr>
<td>23</td>
<td>2.31</td>
<td>20.67</td>
<td>50.67</td>
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<td></td>
</tr>
<tr>
<td>24</td>
<td>2.41</td>
<td>21.56</td>
<td>52.87</td>
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<td>25</td>
<td>2.51</td>
<td>22.46</td>
<td>55.06</td>
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<td>26</td>
<td>2.61</td>
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</tr>
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<td>27</td>
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<td>24.25</td>
<td>59.45</td>
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<td></td>
</tr>
<tr>
<td>28</td>
<td>2.81</td>
<td>25.14</td>
<td>61.65</td>
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<td>29</td>
<td>2.91</td>
<td>26.04</td>
<td>63.84</td>
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<td>30</td>
<td>3.01</td>
<td>26.93</td>
<td>66.04</td>
<td></td>
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<td>40</td>
<td>4.01</td>
<td>36.29</td>
<td>88.14</td>
<td></td>
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<td>50</td>
<td>5.01</td>
<td>45.65</td>
<td>110.23</td>
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<td>60</td>
<td>6.01</td>
<td>54.93</td>
<td>132.32</td>
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<tr>
<td>70</td>
<td>7.01</td>
<td>64.20</td>
<td>154.32</td>
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<td>80</td>
<td>8.01</td>
<td>73.48</td>
<td>176.43</td>
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<td>90</td>
<td>9.01</td>
<td>82.75</td>
<td>198.62</td>
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<tr>
<td>100</td>
<td>10.01</td>
<td>92.03</td>
<td>220.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:** Convert 28 pounds to kg.

28 pounds = 23 pounds + 5 pounds

From the tables: 30 pounds = 13.07 kg and 8 pounds = 3.63 kg

Therefore, 28 pounds = 13.07 kg + 3.63 kg = 16.70 kg

1. The weights used for the English system areavoirdupois (common) weights.
2. The short ton is 2000 pounds.
3. The metric ton is 1000 kg.

Table XXXVIII

227
Volume Conversion - English-Metric Systems

<table>
<thead>
<tr>
<th>cu meters</th>
<th>cu ft</th>
<th>cu yd</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>0.037</td>
<td>0.028</td>
</tr>
<tr>
<td>2</td>
<td>0.074</td>
<td>0.057</td>
</tr>
<tr>
<td>3</td>
<td>0.111</td>
<td>0.085</td>
</tr>
<tr>
<td>4</td>
<td>0.148</td>
<td>0.113</td>
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<tr>
<td>5</td>
<td>0.185</td>
<td>0.142</td>
</tr>
<tr>
<td>6</td>
<td>0.222</td>
<td>0.170</td>
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<tr>
<td>7</td>
<td>0.259</td>
<td>0.198</td>
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<tr>
<td>8</td>
<td>0.296</td>
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<td>9</td>
<td>0.333</td>
<td>0.255</td>
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<td>10</td>
<td>0.370</td>
<td>0.283</td>
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<td>20</td>
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<td>0.566</td>
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<td>30</td>
<td>1.111</td>
<td>0.850</td>
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<td>1.481</td>
<td>1.133</td>
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<td>50</td>
<td>1.851</td>
<td>1.416</td>
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<tr>
<td>60</td>
<td>2.222</td>
<td>1.700</td>
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<tr>
<td>70</td>
<td>2.592</td>
<td>1.982</td>
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<td>80</td>
<td>2.962</td>
<td>2.265</td>
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<tr>
<td>90</td>
<td>3.333</td>
<td>2.548</td>
</tr>
<tr>
<td>100</td>
<td>3.703</td>
<td>2.832</td>
</tr>
</tbody>
</table>

Example: 3 cu yd = 81.0 cu ft

Volume: The cubic meter is the only common dimension used for measuring the volume of solids in the metric system.

Table XXXIX
APPENDIX 3

FORMATS: OPERATIONS ORDERS; INTELLIGENCE ESTIMATE; AND LESSON PLAN

SAMPLE OPERATIONS ORDER

CLASSIFICATION

COPY NUMBER

ISSUING HEADQUARTERS

LOCATION

DATE/TIME GROUP

OPERATION ORDER NUMBER

REFERENCES: MAPS, ETC.

TASK ORGANIZATION (IF ANY)

1. SITUATION:
   a. Enemy Forces.
   b. Friendly Forces.
   c. Attachments and Detachments.

2. MISSION: (A concise, complete statement of the mission to be accomplished).

3. EXECUTION: (A paragraph for each element stating what they are to do. Show attachments, if any; next, show support assignments; next, reserves; last, list any orders which pertain to two or more units; and EES.)

4. ADMINISTRATION AND LOGISTICS: (Instructions concerning water, rations, transportation, supplies, etc).

5. COMMAND AND SIGNAL: (Matters concerning communications, command post, etc).

ACKNOWLEDGE

(ORIGINAL COPY IS SIGNED BY THE COMMANDER)

ANNEXES: 

A OPERATIONS OVERLAY

B FIRE SUPPORT PLAN

DISTRIBUTION:

OFFICIAL:

(ADDITIONAL COPIES ARE SIGNED BY OPERATIONS OFFICER)
Sample Intelligence Estimate

Issuing section and headquarters
Place
Date and Time

INTELLIGENCE ESTIMATE NO.²
Reference: Maps or charts or other documents.

1. MISSION: State the assigned or assumed mission.

2. THE AREA OF OPERATIONS
This paragraph discusses the influence of the area of operations used in arriving at conclusions. This paragraph is based on the facts and conclusions of the analysis of the area of operations if one has been prepared. Effects on our courses of action may be omitted if adequately covered in a current analysis of the area of operations.

a. Weather.
   (1) Existing situation. Include light data and either a weather forecast or forecast of climatic information as appropriate. Use appendixes for detailed information.
   (2) Effect on enemy courses of action. Discuss the effects of weather on each enemy broad course of action. Each discussion concludes with a summary statement as to whether the course of action is favored or not by the weather. Among the courses of action include use of nuclear weapons, chemical and biological agents, special methods, techniques, equipment, procedures, or forces. For example, use of airborne, airmobile forces, surveillance devices, communications, electronic warfare, tactical cover and deception, significant effects on personnel management, logistical support, and civil affairs operations.

b. Terrain.
   (1) Existing situation. Use graphic representations where possible. Use annexes for detailed material. Include as much information as possible.

¹If distributed outside the headquarters, the first line of the heading is the official designation of the issuing command and the ending modified accordingly.
²Numbered successively in each calendar year.

(Classification)

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necessary for an understanding of observation and fire, concealment and cover, obstacles, key terrain features, avenues of approach and include effects of and on each, as appropriate of nuclear fires, biological and chemical agents, etc.

(2) Effect on enemy courses of action. Discuss in the same manner as for the effects of weather in paragraph 2a(2). For defense courses of action give the best defense area and the best avenues of approach leading to the best defense area. For attack courses of action give the best avenues of approach.

(3) Effect on our courses of action. Discuss in the same manner as for effects of terrain on enemy courses of action.

c. Other characteristics. The following additional characteristics are considered, as pertinent, in separate subparagraphs: sociology, politics, economics, psychology, and other factors. Other factors may include such items as science, materiel, transportation, manpower, and hydrography. They are analyzed under the same headings as weather and terrain.

3. ENEMY SITUATION

This paragraph gives that information of the enemy which will permit later development of enemy capabilities and vulnerabilities and refinement of these capabilities into a specific course of action and their relative probability of adoption.

a. Dispositions. Reference may be made to overlays or enemy situation maps or previously published documents.

b. Composition. Summary of order of battle of opposing forces and other enemy forces that can affect accomplishment of mission. Reference may be made to previously published documents. Special mention is made of units capable of electronic warfare, guerrilla warfare, etc., as appropriate.

c. Strength. Enemy strength in this subparagraph is categorized as committed forces, reinforcements, air, and nuclear, chemical, and biological warfare. The purpose of the categorization is to assist in developing enemy capabilities and vulnerabilities for use by the commander and staff in selecting courses of action.

(1) Committed forces. Includes artillery and other units in position to support the committed forces with fire, chemical, and biological warfare agents. Specify which units can deliver nuclear fires, chemical agents, etc., as appropriate. Omit if there are no committed forces.

(Classification)
Committed forces are those enemy ground units (including guerrillas, if appropriate), together with their supporting ground fire units, which are reasonably certain of being employed within a definite area regardless of the specific friendly course of action that may be implemented. Disposition, location, echelon of control, or other factors considered at the time of the estimate are considered in determining which enemy forces are committed forces. The major subordinate units of the comparable enemy commander committed against our force are usually considered as committed forces. The reserves of the enemy command, comparable to that of the estimator's command, committed against our force and the reserves of higher enemy commanders are usually considered as reinforcements. If there is doubt as to whether a unit should be considered as committed forces or a reinforcement, it is considered as a reinforcement. This attributes to the enemy the maximum capability to reinforce his forces that can oppose a given friendly course of action.

(2) Reinforcements. Include designation and location. Omit if there are no reinforcements. (Reinforcements are those enemy forces which may or may not be employed against us depending on our choice of specific course of action and enemy plans. To be considered as reinforcements, the enemy forces must also be capable of being employed against us at various times and places, subject to time and distance considerations, in time to affect the accomplishment of the mission. Disposition, location, echelon of control, or other factors considered at the time of the estimate are considered in determining which enemy forces are considered as reinforcements.)

(3) Air. List number of aircraft by type within operational radius. Include number of possible sorties per day by type of aircraft, if known.

(4) Nuclear, chemical, and biological warfare. State estimate, as appropriate, of number, type, yield, and delivery means of nuclear weapons, chemical, and biological warfare agents available to the enemy. (Estimates of enemy air, nuclear, chemical, and biological warfare capabilities are usually prepared at field army level and higher headquarters. Units subordinate to field army level use the estimates of higher headquarters.)

d. Recent and present significant activities. In this subparagraph selected items of information are listed to provide a basis for analyses to determine relative probability of adoption of specific courses of action and enemy vulnerabilities. Enemy failures to take expected actions are

(Classification)
listed as well as positive information.

e. Peculiarities and weaknesses. Based on knowledge of enemy tactical doctrine, practices, the principles of war, the area of operations, and the enemy situation previously described and discussed, list those items permitting development of vulnerabilities and determination of relative probability of the enemy adoption of specific courses of action. The items listed are grouped under the headings indicated below. Only pertinent headings are used.

1. Personnel. An estimate of strength usually is included if less than 80 percent are authorized and status of morale is included if known.

2. Intelligence. An estimate of enemy intelligence success, ineffectiveness, and susceptibility to deception and detection.

3. Operations. An estimate of combat effectiveness usually is included if less than excellent.

4. Logistics. An estimate of enemy ability to support his forces logistically is included if there are any apparent inabilities to do so.

5. Civil affairs. An estimate of the attitude of civil populace, status of food, supply, medical facilities, and communications.

6. Personalities. An estimate of the capabilities and/or weakness of enemy commanders and principal staff officers.

4. ENEMY CAPABILITIES

Based on all the previous information and analyses, develop and list the enemy capabilities. The listing provides a basis for analyzing the available information to arrive at those capabilities the enemy can adopt as specific courses of action and their relative probability of adoption.

a. Enumeration. State what, when, where, and in what strength for each capability.

b. Analysis and discussion. To provide a basis for conclusions on adoption of enemy capabilities and their relative probability of adoption, each capability, or appropriate combination, is discussed in a separate subparagraph. All the pertinent previous information and conclusions are tabulated as either supporting or rejecting the adoption of the capability. After listing all the evidence, each capability is judged from the enemy point of view on whether the adoption of the capability is or is not advantageous to the enemy. Such judgments need not be made if the conclusion is obvious or if there is no evidence that the enemy will adopt the capability, except when the capability is one which will make the accomplishment of the friendly mission highly doubtful or impossible. This exception is to focus attention on dangerous threats.

5. CONCLUSIONS

Based on all the previous information and analyses, conclusions are stated as
to the total effects of the area of operations on friendly broad courses of action, the courses of action most probable of adoption by the enemy to include their relative probability of adoption, and the effects of the enemy vulnerabilities which can be exploited, and thus furnish a basis for the selection of a friendly course of action.

a. Effects of the area of operations on our courses of action. For attack courses of action, indicate the best avenues of approach. For defense courses of action, indicate the best defense areas and the best avenues of approach leading to and into the defense areas.

This subparagraph is omitted if the discussion of the effects of the area on our courses of action in paragraph 2 has been omitted because of the availability of a current analysis of the area of operations.

b. Probable courses of action. Most probable courses of action are listed in order of relative probability of adoption. A listed course of action may include several courses of action which can be executed concurrently. This is a statement of conclusions based on the preceding information and analyses. Usually not more than two or three courses of action in order of probability of adoption can be justified by the available evidence. If the available evidence of enemy activities is not definitive enough to justify selecting the enemy course of action most probable of adoption, the intelligence officer selects one based on his knowledge of the area of operations, enemy doctrine, enemy practices, and the available evidence. The bases of such selections are clearly indicated to the commander.

c. Enemy vulnerabilities. List the effects of peculiarities and weaknesses that result in vulnerabilities that are exploitable at own higher, or lower echelons. The order of listing has no significance.

/s/ G2

Annexes
Distribution
Authentication

(Classification)
1. Presentation: (state method and time required)
   a. Introduction: (time required)
      (1) Objectives: (what will be presented)
      (2) Reasons: (why it is important)
      (3) Standards (minimum student will be expected to learn)
   b. Explanation or demonstration: (time required)
      (1) Main Point:
         (a) Outline in proper form. Do not use paragraphs.
         (b) Indicate notes in capitals.
      (2) Second main point:
         (a) Outline in proper form.
         (b) Continue breaking subjects into three or four main points and as many subdivisions as necessary.
   c. Summary:
      (1) Review main points.
(2) Stress important items that are difficult under each main point.

2. Application: (state method and time required)
   a. Outline in detail what you are going to do.
      (1) Arrangement of students and equipment.
      (2) Detailed instructions.
   b. Supervision and assistance which will be rendered (plan of conduct).

3. Examination: (state method and time required)
   a. If written, attach a copy.
   b. If oral, write questions in your lesson plan.
   c. If observation, describe what you will do.
   d. If performance, outline plan of examination.

4. Review or Critique: (state method and time required)
   a. Clarify points of difficulty.
   b. Summarize the lesson.
   c. Reemphasize important points (safety precautions)
   d. Strong closing statement - write out in detail.
APPENDIX IV
FIRST AID

70. FIRST AID PRINCIPLES
   a. Stop bleeding.
   b. Protect the wound.
   c. Prevent or treat for shock.
   d. Splint fractures.

71. CONTROL OF BLEEDING
   a. Elevate injured member if not fractured.
   b. Apply pressure bandage.
   c. Use pressure points if blood is gushing (wherever strong pulse is felt). (See figure 107 on pressure points.)
   d. Use tourniquet only as last resort.

72. TYPES OF BLEEDING
   a. Arterial - spurting.
   b. Venous - flowing.
   c. Capillary - oozing.

73. ARTIFICIAL RESPIRATION - BACK-PRESSURE ARM-LIFT
   a. Place your hands on the flat of the victim's back so that the palms lie just below an imaginary line running between the armpits. With tips of your thumbs just touching, spread your fingers downward and outward.
   
   b. Rock forward, with elbows straight until your arms are almost upright and let the weight of the upper part of your body press slowly, steadily, and evenly downward on your hands on the victim's back.
   
   c. Release the pressure by removing the hands from the back without a push and rock slowly backward on your heels. As you do this, slide your hands outward and grasp the victim's arms near the elbows.
   
   d. Draw the victim's arms upward and toward you with just enough lift to feel resistance and tension at the victim's shoulders. (Do not bend your elbow.) Then lower his arms to the ground.
   
   e. Continue this action until normal breathing is resumed by victim.
Figure 107. Pressure points.

Figure 108. Artificial respiration - mouth-to-mouth.
Figure 108. (1) Artificial respiration - mouth-to-mouth.

Figure 108. (2) Artificial respiration - mouth-to-mouth.
<table>
<thead>
<tr>
<th>AILMENT</th>
<th>SYMPTOMS</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock</td>
<td>Pale face</td>
<td>Lay patient on back.</td>
</tr>
<tr>
<td></td>
<td>Cold, clammy skin</td>
<td>Lower head, elevate feet.</td>
</tr>
<tr>
<td></td>
<td>Rapid, weak pulse</td>
<td>Loosen clothing, keep warm.</td>
</tr>
<tr>
<td></td>
<td>Shallow breathing</td>
<td>Feed hot liquids, if conscious.</td>
</tr>
<tr>
<td>Wound</td>
<td></td>
<td>Expose wound.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control bleeding.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apply sterile dressing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treat for shock.</td>
</tr>
<tr>
<td>Fracture</td>
<td>Pain and tenderness</td>
<td>Handle with care; splint before moving.</td>
</tr>
<tr>
<td></td>
<td>Partial or complete loss of</td>
<td>Support the limb on either side until splint</td>
</tr>
<tr>
<td></td>
<td>motion</td>
<td>is applied.</td>
</tr>
<tr>
<td></td>
<td>Deformity</td>
<td>Splints must be long enough to reach beyond</td>
</tr>
<tr>
<td></td>
<td>Swelling</td>
<td>joints above and below fracture and must be</td>
</tr>
<tr>
<td></td>
<td>Discoloration</td>
<td>tied twice above and below break to immobilize limb.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pad all splints.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treat for shock.</td>
</tr>
<tr>
<td>Burn</td>
<td>First degree: Skin red, no</td>
<td>Carefully remove or cut clothing away from</td>
</tr>
<tr>
<td></td>
<td>blister.</td>
<td>burned area.</td>
</tr>
<tr>
<td></td>
<td>Second degree: Skin blistered.</td>
<td>Cover area with sterile dressing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Don't open blister.</td>
</tr>
<tr>
<td></td>
<td>Third degree: Skin destroyed</td>
<td>Keep burned areas apart by separate bandages.</td>
</tr>
<tr>
<td></td>
<td>and charred.</td>
<td>Treat for shock.</td>
</tr>
</tbody>
</table>

Table XL
<table>
<thead>
<tr>
<th>AILMENT</th>
<th>SYMPTOMS</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunstroke (direct exposure to sun)</td>
<td>Flushed face, Dry skin, Strong rapid pulse, Spots before eyes, Headache, High temperature</td>
<td>Remove from sun. Take off all clothing. Elevate head and shoulders. Apply cool compresses or bathe patient in cool water.</td>
</tr>
<tr>
<td>Snake Bite</td>
<td></td>
<td>Treat all snake bites as poisonous. Remain quite, don't move. Place constricting band between bite and heart just tight enough to distend surface veins. Cold pack - treat for shock.</td>
</tr>
</tbody>
</table>

Table XL (1)
Figure 109. Identifying a pit viper.

Figure 110. Not used.
Figure 111. Sea snake.

Figure 112. Teeth marks of snakes, poisonous and non-poisonous.
1. Be alert.

2. Be wary of strangers.


4. Follow or float on waterways to sea coast.

5. Food grows in fields near villages.

6. Conceal all evidence of your being in an area.

7. A few feet of dense jungle is sufficient to conceal a man.

8. Insect repellent applied to fibrous material makes good tinder.

9. Boil or treat all water used for drinking or washing.

Table XLI
GLOSSARY OF TERMS AND ABBREVIATIONS

A and L Company - Administrative and Direct Support Logistics Company. There is at least one per Sector for support of RF/RF with Finance, Maintenance, Supply, Medical, and Transportation sections.

ARVN - Army of Vietnam. The common term used to refer to regular army forces to include airborne and ranger units.

CALC - Corps Area Logistic Command. Four of them provide support with areas of responsibility that approximate corps boundaries.

CTZ - Corps Tactical Zone. The geographical area of responsibility of a corps, but frequently used to refer to the Corps Headquarters itself, e.g., "CTZ will review...", "DTA will submit to CTZ...".

Chieu Hoi - The "Open Arms" program for encouraging the VC to defect to the GVN side.

DAML - Director of Army MAP Logistics. The MACV staff agency that directs Military Aid Program logistics.

DSU - Direct Support Unit. The direct support technical service support unit. Each serves in a particular technical service chain, e.g., Ord DSU, QM DSU.

DTA - Division Tactical Area. The geographical area of responsibility of a Division, but frequently used to refer to the Division Headquarters itself, as with CTZ, above.

GVN - Government of the Republic of Vietnam. Used to refer to the national government, to the entire governmental structure, or as an adjective to describe one of its agents or agencies.

HED SUP PAC - Headquarters Support Activity, Saigon. Also HSAS. The U.S. Navy activity supporting the U.S. Mission in Saigon.
- Sometimes called PICA for Pacification Intensification in Critical Areas. The program for priority attention to expanding the critical Saigon-Cholon base of GVN control.

- HED SUP PAC

- Public Administration Division. A USOM agency with interest chiefly in assisting in the development of the Vietnamese governmental organization and administration.

- Public Health Division. A USOM agency with interest in assisting the Vietnamese public health program.

- Popular Forces. Military forces recruited and employed within a district, organized as platoons and squads.

- Public Safety Division. A USOM agency which assists Vietnamese development of police forces.

- Regional Forces. Military forces recruited and employed within a Province. Organized as companies.

- Republic of Vietnam. The nation itself although sometimes used interchangeably with GVN when referring to the government or with SVN when referring to the land.

- Republic of Vietnam Armed Forces. All armed forces of the republic, all services.

- South Vietnam. Generally connotes the land itself.

- The entire United States team, headed by the U.S. Ambassador and including all U.S. forces and agencies assigned to Vietnam to assist the South Vietnamese government.

- United States Operations Mission. The members of the U.S. Mission generally responsible for the civil side of U.S. advice and assistance, with the exception of that related to the information service.

- United States Information Service. Serves U.S. interests as well as advising the Vietnamese in the information field. Also offers support to PSYOP/CA advisors.

- Viet Cong. Communist insurgents against the RVN government.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIS</td>
<td>Vietnamese Information Service.</td>
</tr>
<tr>
<td>VN</td>
<td>Vietnam, Vietnamese.</td>
</tr>
<tr>
<td>VNAF</td>
<td>Vietnamese Air Force.</td>
</tr>
<tr>
<td>VNN</td>
<td>Vietnamese Navy.</td>
</tr>
<tr>
<td>VNMC</td>
<td>Vietnamese Marine Corps.</td>
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