MCWP 2-25

Ground Reconnaissance Operations

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FOREWORD

The purpose of Marine Corps Warfighting Publication (MCWP) 2-25, *Ground Reconnaissance Operations*, is to establish doctrine and tactics, techniques, and procedures for Marine Corps ground reconnaissance. This publication is intended for officers and enlisted personnel who are involved with the direction, planning, and execution of ground reconnaissance missions. It is also designed to assist commanders and staffs of all Marine air-ground task force (MAGTF) units with integrating ground reconnaissance into all other planning and operations.

Relevant to the employment of ground reconnaissance at all echelons of command from the infantry battalion to the Marine expeditionary force, MCWP 2-25 defines the organization, roles, operational requirements, mission tasks, battlefield functions, and command and control relationships of reconnaissance assets within the MAGTF. Although this publication will address some tactics, techniques, and procedures, it is primarily intended to focus on command, control, and planning for reconnaissance operations.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

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Ground Reconnaissance Operations

Table of Contents

Chapter 1. Full Spectrum Operations

Chapter 2. Units and Organizations

Chapter 3. Command and Control

Chapter 4. Mission Development

Chapter 5. Planning Overview

Chapter 6. Reconnaissance Operations

Chapter 7. Methods of Maneuver

Chapter 8. Communications

Chapter 9. Intelligence Operations and Reporting Dissemination

Appendices

Glossary

References and Related Resources

CHAPTER 1
FULL SPECTRUM OPERATIONS

Chapter 1 discusses full spectrum operations as a basis for understanding the role of ground reconnaissance units within the Marine air-ground task force (MAGTF). The chapter defines and discusses those units, as well as their organization and missions. It also introduces reconnaissance terms and concepts. Additionally, it provides an overview of joint and other Service assets. Chapter 1 will introduce the discussion of the reconnaissance battalions and the force reconnaissance (FORECON) companies that will continue throughout the remainder of this publication. It also provides an example of how ground reconnaissance units have been successfully used in the full range of military operations.

The term "ground reconnaissance" includes all reconnaissance battalions and FORECON companies. The tactics, techniques, and procedures (TTP) in this publication are also useful to all US Marine Corps infantry battalion scout sniper platoons, light armored reconnaissance units, radio battalions, and special operations units.

Many of the subjects covered in this publication are common to all infantry and reconnaissance units and should be a ready and useful reference.

MARINE CORPS OPERATIONS

Full spectrum operations involve the simultaneous conduct of any combination of the seven types of Marine Corps operations across the spectrum of conflict. Marine Corps operations include the following:

- Offensive operations.
- Defensive operations.
- Other tactical operations.
- Stability operations.
- Counterinsurgency (COIN) operations.
- Reconnaissance and security operations.
- Sustainment operations.

Two critical components of each operation are the commander understanding the enemy and the operational environment. Therefore, this chapter discusses how the commander can combine the types of Marine Corps operations based on the area of operations (AO). The mission dictates which type predominates. Finally, because ground reconnaissance units are integral parts of the

intelligence warfighting function, this section discusses how they directly support the commander's understanding of the enemy.

For more information about the seven types of Marine Corps operations, refer to Marine Corps Doctrinal Publication (MCDP) 1-0, *Marine Corps Operations*.

Ground Reconnaissance Support for Marine Corps Operations

Ground reconnaissance supports the full spectrum of Marine Corps operations Procedures relationship to the others in full spectrum operations. The mission dictates which type of operation predominates. Ground reconnaissance support to Marine Corps operations includes—

- *Amphibious Reconnaissance and Surveillance*. Plan, coordinate, and conduct pre-landing hydrographic surveys of planned beaches, landing sites, and/or ports to determine ability to support amphibious operations. This includes providing confirmatory beach reports, conducting surveys of rivers, and other riverine operations.
- *Ground Reconnaissance and Surveillance*. The primary function of collection within the MAGTF AO and area of influence. This includes area and zone reconnaissance, employing technical surveillance assets, and providing ground perspective imagery. When properly task organized with other forces or equipment, specialized engineer, radio, mobile, and other unique reconnaissance missions may be conducted.
- *Battlespace Shaping Operations*. Operations in support of the MAGTF commander's battlespace shaping plan to facilitate friendly forces maneuver and deny the enemy freedom of action. This includes employment of direct fire weapons, demolitions, indirect fire, precision guided munitions, and naval fires to destroy or neutralize enemy forces.
- *Specialized Limited Scale Raids*. Utilization of specialized surface, subsurface, and airborne insertion/extraction methods by the raid force. These methods include helicopter rope suspension techniques (HRST), mobile, helocast operations (which includes helocast of CRRCs, commonly referred to as Limp Duck operations), combatant dive operations, parachute operations, and special patrol insertion and extraction (SPIE).
- *Specialized Insertion and Extraction*. The maneuver of reconnaissance forces via specialized, usually clandestine, surface, subsurface, and/or aerial means to gain access to the operational environment.

Offensive Operations

The commander conducts offensive operations within the context of the single battle. Offensive operations are conducted to take the initiative from the enemy, gain freedom of action, and mass effects to achieve objectives. Ground reconnaissance support to offensive operations includes—

- Amphibious reconnaissance and surveillance.
- Ground reconnaissance and surveillance.
- Battlespace shaping operations.
- Specialized limited scale raids.
- Specialized insertion and extraction.

Defensive Operations

Defensive operations are employed to defeat an enemy attack. The MAGTF defends in order to gain sufficient strength to attack. Defensive operations require precise synchronization since the defender is constantly seeking to regain the initiative. (MCDP 1-0) Ground reconnaissance support to defensive operations includes—

- Ground reconnaissance and surveillance.
- Battlespace shaping operations.
- Specialized limited scale raids.
- Specialized insertion and extraction.

Other Tactical Operations

Ground reconnaissance support to other tactical operations includes—

- Amphibious reconnaissance and surveillance.
- Ground reconnaissance and surveillance.
- Battlespace shaping operations.
- Specialized limited scale raids.
- Specialized insertion and extraction.

Stability Operations

The National Security Strategy calls for engagement with other nations and a rapid response to political crisis and natural disasters to help shape the security environment throughout the world. While this engagement or response may take the form of financial or political assistance, the use of US military forces is always an option for the National Command Authorities. Stability operations may take the following form:

- Security.
- Foreign humanitarian assistance.
- Economic stabilization and infrastructure.
- Rule of law.
- Governance and participation.

Ground reconnaissance support to stability operations includes—

- Amphibious reconnaissance and surveillance.
- Ground reconnaissance and surveillance.
- Battlespace shaping operations.

Counterinsurgency Operations

Ground reconnaissance support to COIN operations includes—

- Amphibious reconnaissance and surveillance.
- Ground reconnaissance and surveillance–A significant role of ground reconnaissance in COIN and stability operations is collections, analysis, and dissemination of human intelligence (HUMINT).

- Battlespace shaping operations.
- Specialized limited scale raids.
- Specialized insertion and extraction.

Reconnaissance and Security Operations

Ground reconnaissance support to reconnaissance operations includes—

- Amphibious reconnaissance and surveillance.
- Ground reconnaissance and surveillance.
- Specialized insertion and extraction.

Security operations involve measures taken by a military unit, activity, or installation to protect it against all acts which may impair its effectiveness. Security operations can be defensive in nature or involve offensive actions. There are three types of security missions: screen, guard, and cover. Ground reconnaissance support to security operations includes—

- Amphibious reconnaissance and surveillance.
- Ground reconnaissance and surveillance.
- Battlespace shaping operations.
- Specialized limited scale raids.
- Specialized insertion and extraction.

MILITARY ENGAGEMENT, SECURITY COOPERATION, AND DETERRENCE

Military engagement, security cooperation, and deterrence activities encompass a wide range of actions where the military instrument of national power prevents and deters conflict. These actions generally occur regularly in all geographic areas of responsibility regardless of other ongoing contingency operations, major operations, or campaigns. (MCDP 1-0) (For ground reconnaissance support to military engagement, security cooperation and deterrence activities, refer to ch. 6.)

CRISIS RESPONSE AND LIMITED CONTINGENCY OPERATIONS

A crisis is an incident or situation involving a threat to a nation, its territories, citizens, military forces, possessions, or vital interests that develops rapidly and creates a condition of such diplomatic, economic, political, or military importance that commitment of military forces and resources is contemplated to achieve national objectives. (MCDP 1-0)

A contingency is a situation requiring military operations in response to natural disasters, terrorists, subversives, or as otherwise directed by appropriate authority to protect US interests.

For ground reconnaissance support to crisis response and limited contingency operations refer to Chapter 6.

INTELLIGENCE

The key to employing the MAGTF in full spectrum operations is positioning it to gain and maintain the tactical advantage over threat forces. Essential to this operational concept is timely, relevant, and accurate intelligence. Ground reconnaissance units are organized, trained, and equipped to provide the critical and timely information needed by the commander and his staff in order to develop the common intelligence picture and common operational picture (COP).

The fog and friction of war will never allow the commander to have a perfect picture of the battlespace. However, reconnaissance operations can reduce uncertainties about an unfamiliar and hostile enemy who is actively trying to conceal information about his forces and intentions. Reconnaissance is an essential and continuous operation conducted to collect information and to gain and maintain contact with the enemy. Reconnaissance of some type should always precede a commitment of forces. Failure to conduct a thorough reconnaissance may cause the loss of initiative or failure to exploit fleeting opportunities. Lack of reconnaissance can result in the enemy achieving surprise, inflicting unacceptable losses on friendly forces, and causing the failure of the mission. As part of the overall MAGTF intelligence effort, reconnaissance operations support the commander's decisionmaking process by collecting information to satisfy the commander's critical informational requirements (CCIRs) and develop situational awareness.

BATTLESPACE FRAMEWORK

The battlespace framework depicts how the commander may organize his battlespace so he can relate his forces to one another in time, space, event, and purpose. The battlespace framework consists of envisioned deep, close, and rear operations. The nature of the mission may also mean organizing into contiguous or noncontiguous deep, close, and rear areas.

Deep Operations

Deep operations afford commanders an opportunity to shape or prevent future close battles. Deep operations can strip away enemy capabilities, force an early culmination, or otherwise attack the enemy system so friendly forces can handle what remains when the enemy forces become a part of the close battle.

By conducting deep operations, the commander can seize the initiative, create windows of opportunity for decisive action, restrict the enemy's freedom of maneuver, and disrupt the cohesion and tempo of enemy operations.

The MAGTF intelligence assets, such as force reconnaissance and signals intelligence (SIGINT), contribute to the conduct of deep operations. Also contributing to deep operations are the aviation combat element (ACE) and reconnaissance battalions.

Deep operations are normally conducted to gain access to the terrain and persist in the environment to gather information focused on the military aspects of terrain; the enemy's follow-on and supporting forces; command and control (C2) nodes; and key lines of communications and facilities. Deep operations include—

- Interdiction through fire and maneuver (hunter/killer operations, specialized limited scale raids).
- Reconnaissance (underwater reconnaissance, amphibious reconnaissance, ground reconnaissance).
- Information operations integrating deception and military information.
- Offensive antiair warfare (terminal guidance of munitions, combat assessments, and battle damage assessments [BDA]).
- Electronic warfare (EW).

Close Operations

Close operations project power against enemy forces in immediate contact. These operations require speed and mobility to rapidly concentrate overwhelming combat power at the critical time and place. Fire and maneuver conducted by combined arms forces from the ground combat element (GCE) and the ACE dominate close operations. Combined arms forces maneuver to enhance the effects of their fires and conduct fire support operations to enhance their ability to maneuver. Elements of the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISR-E) contribute to the conduct of close operations.

Close operations are conducted to achieve the commander's intent and accomplish the mission. Ground reconnaissance assets are employed to enable and support the maneuver of the GCE to the objective area. The GCE's scout sniper assets are employed to conduct surveillance of the target area and provide precision fires in support of their organic battalion's actions on the objective. Close operations include—

- Reconnaissance (amphibious reconnaissance and ground reconnaissance).
- Collection of intelligence.
- Specialized limited scale raids.
- Surveillance of the target.
- Maneuver of the force.
- Coordination and control of fires.
- Assessment.

Rear Operations

Rear operations are conducted by all MAGTF elements. Sustainment and security are normally the dominant rear area activities to ensure the freedom of action of the force and continuity of

operations, logistics, and command and control. Ground reconnaissance support to rear operations is the same as that which is provided for sustainment and security operations.

EMPLOYMENT CONCEPTS

The mission of ground reconnaissance is to provide battlespace awareness by gaining access to the operational environment, identifying points of entry, identifying routes, assessing the effects of weather and terrain on friendly/enemy troops, assessing the enemy threat, and isolating the objective. Battlespace awareness is gained from the "outside-in" through access-oriented, maneuver-oriented, and target-oriented reconnaissance operations.

Access Operations

Access operations allow the commander to employ shaping actions to set the conditions for achieving a decision. Shaping actions are lethal and nonlethal activities conducted throughout the battlespace to attack an enemy capability or force or to influence the enemy commander's decisionmaking.

Access-oriented reconnaissance operations can include—

- Limiting enemy freedom of action.
- Denying the enemy the ability to concentrate forces.
- Deceiving the enemy about friendly operations.
- Defeating enemy capabilities.
- Altering the tempo of operations.
- Gaining and maintaining momentum.
- Influencing perceptions of the enemy, allies, and the local civilian population.

Shaping makes the enemy vulnerable to attack, impedes or diverts his attempts to maneuver, aids the MAGTF's maneuver, and otherwise dictates the time and place for decisive action. It forces the enemy to abandon his course of action (COA) and adopt a COA favorable to the MAGTF.

The commander attempts to shape events in a way that allows several options, so when the moment for decisive action arrives, the commander is not restricted to only one means of achieving it.

Maneuver Operations

Reconnaissance maneuver operations allow the commander to set the conditions for the movement and maneuver of the force, coordination and control of fires, and collection of intelligence about the objective area. Maneuver-oriented reconnaissance operations can include—

- Facilitating the maneuver of forces to gain a positional advantage.
- Facilitating friendly forces achieving surprise on the target or objective area.

- Enabling the exploitation of advantages in terrain, weather, and periods of darkness.
- Enabling the commander to gain an advantage over the enemy by exploiting every aspect of the situation to achieve victory.
- Supporting the commander by combining supporting arms, organic fires, and maneuver in such a way that any action the enemy takes to counteract one action makes the enemy more vulnerable to another.

Target Operations

Target operations allow the commander to conduct manned and persistent surveillance of an objective or target and collect intelligence about the objective area. Target-oriented reconnaissance operations can enable the assault force to create the commander's desired effects during actions on the objective and provide near-real-time ground perspective imagery of the target or objective area.

RISK ASSESSMENT

Reconnaissance forces conduct a risk assessment based upon the proximity of the reconnaissance force to the target area or objective and the likelihood of contact with the enemy, impact to the scheme of maneuver, and probability of fratricide due to improper deconfliction of fires or misidentification of friend/foe.

This assessment is color based using green, yellow, and red. Green represents a low risk of compromise to the objective if the reconnaissance force makes enemy contact. Yellow represents a medium risk of compromise to the objective depending on the location of the contact with the enemy. Red represents a definite compromise of the objective and risk of impacting friendly force scheme of maneuver.

The supported unit must make a risk versus gain determination of how close the reconnaissance forces supporting their operation should get to the objective and how far (time wise) in advance of the operation that the reconnaissance penetration should be made (see fig. 1-1 on page 1-9).

Access Operations

Access operations are conducted during the supported unit's planning phase to shape the operation. Access-oriented reconnaissance operations are normally conducted in the reconnaissance green zone. Characteristics of the reconnaissance green zone include—

- Low risk of compromising the target area or objective.
- Allows ground reconnaissance forces to make chance contact with the enemy and still continue the mission once contact is broken.
- Low potential of fratricide.
- Low risk of interfering with the supported, supporting, or adjacent units' schemes of maneuver.
- Low risk of improper deconfliction of fires.

	Green Zone	Yellow Zone	Red Zone
	Access Operations	Maneuver Operations	Target Operations
Objective Compromise	Low Risk	Medium Risk	High Risk
Scheme of Maneuver	Low Risk	Medium Risk	Hign Risk
Fratricide Potential	Low Risk	Medium Risk	High Risk
Deconfliction of Fires	Low Risk	Medium Risk	High Risk

Figure 1-1. Access, Maneuver, and Targeting Operations.

Maneuver Operations

Maneuver operations are conducted during the supported unit's transition from the planning phase to the execution phase. Maneuver-oriented reconnaissance operations are normally conducted in the reconnaissance yellow zone. Characteristics of the reconnaissance yellow zone include—

- Medium risk of compromising the target area or objective.
- Reconnaissance chance contact with the enemy may potentially compromise a target or objective area.
- Medium potential of fratricide.
- Medium risk of interfering with the supported, supporting, or adjacent units' schemes of maneuver.
- Medium risk of improper deconfliction of fires.

Target Operations

Target operations are conducted during the transition from the planning phase to the execution phase. Target-oriented reconnaissance operations are normally conducted in the reconnaissance red zone. Characteristics of the reconnaissance red zone include—

- High risk of compromising the target area or objective.
- Reconnaissance chance contact with the enemy will compromise a target or objective area.
- High potential of fratricide.
- High risk of interfering with the supported, supporting, or adjacent units' schemes of maneuver.
- High risk of improper deconfliction of fires.

CHAPTER 2
UNITS AND ORGANIZATION

Reconnaissance attempts to answer questions the commander has about the enemy that the MAGTF will fight and the battlespace in which the MAGTF will operate. The term reconnaissance describes any mission—aerial, ground, or amphibious—"undertaken to obtain, by visual or other detection methods, information about the activities and resources of the enemy or adversary to secure data on the meteorological, hydrographic, or geographic characteristics of a particular area." (Joint Publication [JP] 1-02, *Department of Defense Dictionary of Military and Associated Terms)* More simply, reconnaissance obtains information about the characteristics of a particular area and any known or potential enemy within it. This is traditional reconnaissance and is part of intelligence operations. Throughout our history, ground reconnaissance Marines have done much more than just obtain information.

Reconnaissance units possess organic equipment, such as small unmanned aircraft systems (UAS), MAGTF secondary imagery dissemination system (MSIDS), low-light amplification systems, and digital cameras that greatly assist in collecting information and shaping the battlespace. The information these and other systems gather can be enhanced, compressed, and sent immediately to the commander or intelligence section of the supported unit.

Ground reconnaissance provides Marine commanders with a capability that is an overlap of intelligence, security, and economy of force operations. Ground reconnaissance Marines are more than just information collectors. Examining the history of ground reconnaissance reveals that it is not a heritage of traditional reconnaissance—it is a heritage of scouting. This is the defining difference between the ground reconnaissance community and other MAGTF, Service, and joint reconnaissance assets.

Reconnaissance implies the start of a process; it is the collection of information for the intelligence cycle. Scouting is not the start of a process; it is a complete process. Scouting is not passive; scouting is aggressive. Scouting entails hunting, investigating, and evaluating. The Marine Corps ground reconnaissance community is poised to be the "eyes and ears" of the commander. Ground reconnaissance also enables the commander to "reach out and touch" the enemy when and where the enemy least expects it.

CHARACTERISTICS

The reconnaissance units that compose the MAGTF's reconnaissance assets share many characteristics, capabilities, limitations, organizational structures, and missions. Each unit is

organized and equipped to address the specific information needs of the commander. These units are typically lightly armed, operate in platoon size or smaller, and are extremely mobile.

MISSIONS AND ORGANIZATION

Reconnaissance unit operations directly contribute to the collection of intelligence at the tactical, operational, and strategic levels of war. The information these units gather is critical to successful operations by combined arms, joint and multinational commanders, and units.

All MAGTF elements have reconnaissance capabilities. Each element brings to the MAGTF its own unique capabilities. Together they collect the information to plan and conduct MAGTF operations. This publication is focused on only those reconnaissance assets that conduct amphibious and ground reconnaissance—the ground reconnaissance units. There are six different units within the MAGTF that conduct amphibious and ground reconnaissance:

- Radio battalion.
- Ground sensor platoon.
- FORECON companies.
- Reconnaissance battalions.
- Light armored reconnaissance.
- Scout snipers.

RADIO RECONNAISSANCE PLATOON (RADIO BATTALION)

Organic to the command element, radio battalion provides ground-based SIGINT, EW, communications security (COMSEC) monitoring, and special intelligence communications capability. It plans and coordinates the employment of its subordinate elements, to include radio reconnaissance elements beyond the forward edge of the battle area and mobile EW support system in light armored vehicles.

Radio reconnaissance platoons are trained in special insert and extract means and basic reconnaissance capabilities. This additional training makes the radio reconnaissance team capable of advance force, pre-assault, deep post-assault, and Maritime Raid Force SIGINT missions as assigned. Radio reconnaissance teams support the six intelligence functions. Additionally, they may be tasked to conduct SIGINT signals search and data base development in order to enhance understanding of threat operations prior to the arrival of other SIGINT support unit forces. For detailed mission, capabilities, and organizations of these units, see Marine Corps Warfighting Publication (MCWP) 2-22, *Signals Intelligence*.

These units can conduct the following missions:

- Provide SIGINT derived indications and warning (I&W) intelligence support to advance forces.
- Provide SIGINT collections and reporting in areas not accessible to conventional signals support teams.
- Provide SIGINT collections and reporting in support of assault and landing forces.
- Provide collection of unique signals. Unique signals are signals expected to have intelligence value that cannot be collected by other reasonable means.
- Conduct threat signals search and data base development.

GROUND SENSOR PLATOON (INTELLIGENCE BATTALION)

Ground sensor platoons (GSPs) are trained to plan the employment of, to operate, and to maintain a remote sensor system in support of MAGTF operations. Organic to the intelligence battalion and subordinate to the command element, this unit provides remote sensor, imagery interpretation, and topographic intelligence support. The GSP plans, executes, and monitors MAGTF reconnaissance (sensor) operations. (For missions, capabilities, and organizations of GSPs, see Marine Corps Reference Publication [MCRP] 2-24B, *Remote Sensor Operations*.)

The GSPs can conduct the following missions:

- Plan employment of remote sensor systems in support of MAGTF operations.
- Conduct remote sensor monitoring operations.
- Maintain remote sensor equipment.
- Train personnel to emplace remote sensors and data relays.
- Assist in the planning and execution of remote sensor emplacement missions.
- Implant air-delivered remote sensors from helicopters.
- Provide liaison teams to the MAGTF command element and units designated to receive direct support from the remote sensor system.

FORCE RECONNAISSANCE COMPANY

The mission of the FORECON company is to conduct amphibious reconnaissance, surveillance, and raids in support of the Marine expeditionary force (MEF), other MAGTFs, or joint task forces (JTFs) as required. These units conduct reconnaissance in support of advance force operations (AFO), MAGTF operations, and GCE operations. Force reconnaissance uses specialized insertion, patrolling, reporting, and extraction techniques to carry out reconnaissance and surveillance tasks in support of the MAGTF and maintains the capability to perform special operations capable tasks. During operations, the reconnaissance battalion exercises administrative

control (ADCON) while the MEF exercises operational control (OPCON). For more information on the missions, capabilities, and organizations of FORECON companies, see MCRP 5-12D, *Organization of Marine Corps Forces*.

These units can conduct the following missions:

- Conduct AFO, amphibious reconnaissance, underwater reconnaissance, and ground reconnaissance or surveillance to observe, identify, and report enemy activity as well as collect and report other information of military significance.
- Conduct specialized terrain reconnaissance, including reconnaissance of hydrographic surveys, beaches, roads, bridges, routes, urban areas, helicopter landing zones (LZs), airborne drop zones (DZs), aircraft forward operating sites, and landing craft, air cushion (LCAC) LZs.
- Conduct engineer; chemical biological radiological or nuclear (CBRN); mobile; and other unique reconnaissance missions when properly organized with other forces, equipment, or personnel.
- Implant and/or recover sensors and beacons.
- Collect ground perspective imagery.
- Conduct counterreconnaissance.
- Conduct initial terminal guidance (ITG) for helicopters, landing craft, and parachutists.
- Engage selected targets with supporting arms or organic weapons, as directed, including terminal guidance of precision guided munitions.
- Conduct post-strike reconnaissance to determine and report BDAs on a specific target or area.
- Conduct specialized limited scale raids. These operations include, but are not limited to seizing, damaging, or destroying critical enemy targets; performing static maritime platform and maritime interdiction operations; capturing selected enemy personnel; and recovering sensitive items or personnel.

RECONNAISSANCE BATTALION

Organic to the GCE, reconnaissance battalions are employed to observe and report on enemy activity and other information of military significance. Their capabilities are similar to those of FORECON. The reconnaissance battalion provides amphibious reconnaissance, battlespace shaping, ground reconnaissance and surveillance in support of the Marine division (MARDIV), subordinate division elements, or a designated MAGTF.

Reconnaissance battalions conduct the same missions as the FORECON companies except where FORECON companies conduct specialized limited scale raids the reconnaissance battalions conduct raids and direct action (DA). However, the operations listed under limited scale raids are the same as those that may be conducted during raids or DAs.

LIGHT ARMORED RECONNAISSANCE BATTALION

Organic to the GCE, the unit operates in forward areas or along the flanks and can be relied upon to provide early warning of enemy contact. The Marines in each light armored vehicle are trained in information collection and reporting. These units are capable of a wide variety of missions due to their inherent mobility and organic firepower.

The mission of light armored reconnaissance battalion is to conduct reconnaissance, security, and economy-of-force operations, and within capabilities, conduct limited offensive or delaying operations that exploit the unit's mobility and firepower. (For more information on the missions, capabilities, and organizations of light armored reconnaissance battalions, see MCRP 5-12D.)

These units can conduct the following missions:

- Provide screening for any size MAGTF.
- Provide forces for reconnaissance and surveillance missions.
- Collect ground perspective imagery.
- Conduct limited offensive operations to support MAGTF objectives.
- Provide forces for raids and special operations.
- Locate and fix in place enemy forces for destruction.
- Destroy or disrupt enemy forces through fire and maneuver.
- Support other MAGTF elements with supporting arms.
- Perform economy-of-force operations, as required.

SCOUT SNIPER PLATOON (INFANTRY BATTALION)

Scout sniper platoons are organic to the infantry battalions within the GCE. Although the platoon can be employed in support of a myriad of tactical missions in defensive and offensive operations, they are primarily employed to provide timely surveillance and tactical data, and coordinate supporting arms and close air support (CAS). The scout sniper platoon provides the infantry battalion with extended area observation.

The mission of the scout sniper platoon is to gain and maintain contact with the enemy; to find the enemy and report his location and activities; and, if the enemy achieves separation, to reacquire his location and to report on all activities of the enemy in proximity to the infantry battalion in accordance with the commander's informational requirements. The ability of scout snipers to penetrate into hostile areas to observe the enemy without being detected makes them uniquely suited to perform a wide variety of missions and essential tasks. (For more information on the missions, capabilities, and organizations of scout sniper platoons, see MCRP 5-12D.)

These units can conduct the following missions:

- Conduct reconnaissance/surveillance missions within the infantry battalion AO in support of the commander's information requirements.
- Conduct tracking missions within the battalion's AO.
- Conduct adjustment of fire missions within the battalion's AO.
- Conduct ITG missions in support of the battalion.
- Provide guide service within the battalion's AO.
- Conduct sniper operations.
- Conduct deception operations in support of the battalion's mission.
- Conduct specialized terrain reconnaissance in support of the battalion.
- Conduct BDA, as required.

JOINT AND OTHER SERVICE ASSETS

Marine Corps ground reconnaissance units are not special operations forces (SOF), although they do share many of the same TTP, terms, and equipment. The clearest distinction between these units is who they work for and where they operate on the battlefield. In accordance with Title 10 United States Code (USC) section 167, additional units or forces may be designated as SOF by the Secretary of Defense. (For detailed information relating to SOF and their organization, see JP 3-05, *Special Operations*.) Forces specifically designated as SOF are discussed in the following subparagraphs:

Special Forces

Special forces are organic to the US Army. The mission of the special forces groups is to plan, prepare for, and when directed, deploy to conduct unconventional warfare, foreign internal defense (FID), special reconnaissance, and DA in support of US national policy objectives within designated areas of responsibility.

Ranger Regiment

The ranger regiment is organic to the US Army and is the Service's largest special operations combat element. The mission of the ranger regiment is to plan, execute, and exercise command and control of special operations and light infantry missions in support of the Nation's military objectives and global interests across the full spectrum continuum, worldwide.

Special Operations Aviation (Rotary-Wing)

The US Army has organic, rotary-wing special operations aviation units whose mission is to organize, train, equip, resource, and employ special operations aviation forces worldwide in support of SOF and the warfighting commanders.

Sea, Air, Land Teams

Sea, air, land (SEAL) teams are organic to the US Navy. The SEAL team's mission is to conduct DA, unconventional warfare, FID, special reconnaissance, and counterterrorism operations, primarily in maritime and riverine environments.

Special Warfare Combatant Craft Crewman

The special warfare combatant craft crewman is organic to the US Navy. The mission of the special warfare combatant craft crewman is to insert and extract SEAL teams and other special operations personnel from a variety of naval surface warfare vessels.

Special Operations Aviation (Fixed- and Rotary-Wing)

The US Air Force has organic, fixed- and rotary-wing special operations aviation units. The mission of the special operations squadrons are to assess, train, advise, and assist foreign aviation combat and combat support units in aircraft maintenance, logistics, air base ground defense, command and control, aeromedical support, personal survival, personal recovery, and other functions supporting combat air operations.

Special Operations Combat Controller

The special operations combat controller is organic to the US Air Force. Combat controllers are battlefield airmen assigned to special tactics squadrons. They are trained SOF and certified Federal Aviation Administration air traffic controllers. The mission of a combat controller is to establish assault zones or airfields, while simultaneously conducting air traffic control, fire support, command and control, DA, counterterrorism, FID, humanitarian assistance, and special reconnaissance in the joint arena.

United States Marine Corps Forces, Special Operations Command

United States Marine Corps Forces, Special Operations Command (MARSOC) is organic to the US Marine Corps and a Service component of the United States Special Operations Command (USSOCOM). The MARSOC is tasked by the commander of USSOCOM to train, organize, equip and, when directed by commander of USSOCOM, deploy task-organized, scalable, and responsive Marine Corps special operations forces worldwide in support of combatant commanders and other agencies. The MARSOC has been directed to conduct FID, special reconnaissance, and DA. Commander, USSOCOM assigns MARSOC missions based on USSOCOM priorities. The MARSOC units then deploy under USSOCOM deployment orders.

OTHER UNITS CAPABLE OF SPECIAL OPERATIONS

Designated SOF are principally structured to be the force of choice for special operations under most circumstances. However, under certain circumstances, conventional forces may be capable of conducting a specific special operation. Although not designated as SOF, these forces receive

enhanced training and equipment to support or conduct special operations on a mission specific basis. (For additional information, see JP 3-05.) These forces include—

- Designated US Navy surface, subsurface, and aviation elements.
- Designated US Air Force airlift, strike, and tanker elements.
- Designated US Marine Corps units and forward deployed MAGTFs; such as the Marine expeditionary unit (MEU).

MISSION OF THE RECONNAISSANCE BATTALION

The primary mission of the reconnaissance battalion or elements thereof, is to conduct AFO, battlespace shaping, amphibious reconnaissance, underwater reconnaissance, and ground reconnaissance or surveillance to observe, identify, and report intelligence information on the enemy, weather, and terrain.

The reconnaissance battalion is not equipped or trained for decisive or sustained combat due to their inability to absorb large numbers of casualties. They usually accomplish the mission through stealth, specialized maneuver, and rapid reporting. Normally operating in general support of the GCE, the battalion tasks-organizes or provides detachments, as required to accomplish assigned missions. As directed, during Phase 0-II operations, the MEF will task subordinate GCE to provide reconnaissance battalion assets to augment the MEF level intelligence, reconnaissance, and surveillance plan. When circumstances warrant decentralized control, a reconnaissance company or reinforced platoon may be placed in direct support of an infantry regiment or battalion.

The reconnaissance battalions core plus missions include conducting COIN warfare, economy-of-force operations, and security and stability operations across the full spectrum of conflict. During these secondary missions, the reconnaissance battalions provide a broad range of capabilities from supporting disaster relief to humanitarian operations. These operations call for pinpoint intelligence collection accuracy and timely reporting to support MAGTF delivery of services, fires, or other support, and usually require great restraint in the use of force. Reconnaissance operations may emphasize objectives such as the location and identification of lines of communications, services, and infrastructure to support threatened civilian populations. The reconnaissance assets of the MAGTF are exceptionally useful in the surveillance of indigenous peoples and identification and targeting of the hostile segments of the population. More detailed information on the secondary missions of reconnaissance units can be found in MCDP 1-0.

ORGANIZATION OF THE RECONNAISSANCE BATTALION

The reconnaissance battalion plans, coordinates, and conducts ground combat operations and associated operations, as directed, across the spectrum of conflict and in any expeditionary

environment. The battalion, in consonance with the MARDIV, plans, coordinates, and directs the reconnaissance actions of teams, platoons, and companies.

Concept of Employment

With the assistance of a primary and special staff, the battalion commander analyzes the mission, develops and considers COAs, and directs and supervises the operation of the reconnaissance battalion. The company headquarters is primarily employed to provide and coordinate security for C2 functions of the battalion headquarters and assist in coordinating combat service support. The battalion headquarters, the communications section, and the service support sections support the entire battalion. Selected billets maintain the capability for insertion by static line and military free fall (MFF) parachuting as well as combatant diving.

Whether employed in general support of a MAGTF or MARDIV, or employed in indirect support of a subordinate unit of the division, the reconnaissance battalion provides the organic capability to establish a reconnaissance operations center (ROC) to function as the operations, information, and coordination center for all reconnaissance units during sustained operations. If the unit deploys with a higher headquarters (HHQ) command group that uses a surveillance and reconnaissance coordination center (SARCC), the ROC will either provide liaison to or integrate with the SARCC.

The companies originating from the reconnaissance battalion provide the primary means of ground reconnaissance for the GCE. The reconnaissance battalion commander and staff perform those functions that are necessary to effectively plan and command the execution of assigned missions, and to advise the supported division commander, intelligence officer, and operations officer on the employment of the battalion.

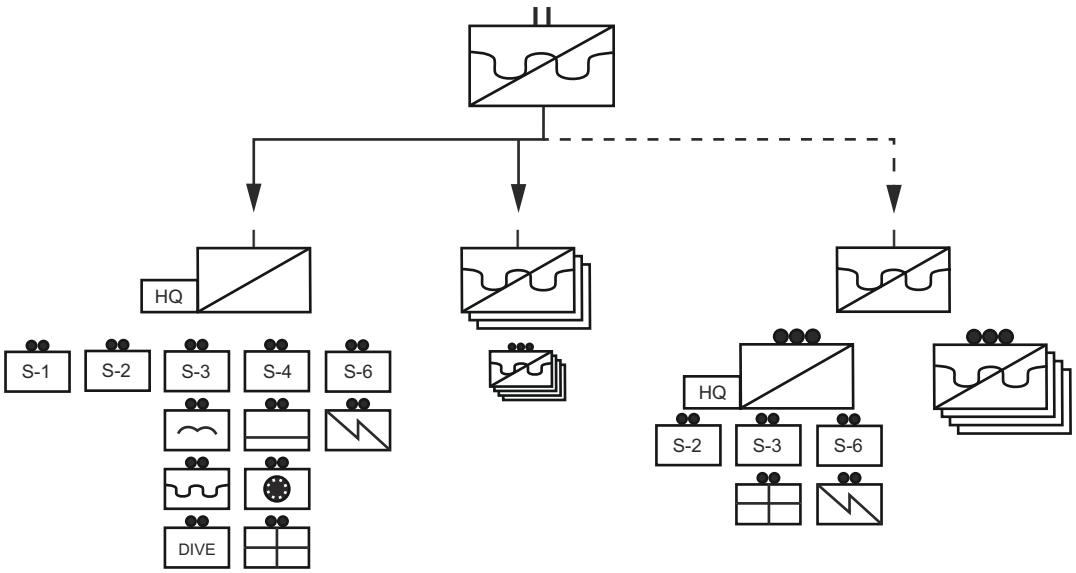
The Marine Corps' active duty reconnaissance battalions are the 1st, 2d, and 3d Reconnaissance Battalions. These battalions consist of three reconnaissance companies and an H&S company. Each reconnaissance company consists of four platoons (see fig. 2-1 on page 2-10).

In the United States Marine Corps Forces Reserve, 4th Reconnaissance Battalion is responsible for providing trained and qualified individuals for active duty service in times of war, national emergency, or in support of contingency operations. It also provides personnel and operational tempo relief for active component forces during times of peace.

Firepower. The organic firepower of the battalion consists of individual weapons, grenade launchers, sniper rifles, as well as light, medium, and heavy machine guns.

Mobility. Although the headquarters and service (H&S) company is to a great extent foot mobile, light motor transport provides mobility for weapons, equipment, personnel, and logistics during mounted reconnaissance operations. The H&S company is also readily transported by boats, tracked vehicles, helicopters, amphibious ships, landing craft, and tactical/strategic aircraft.

Communications. Organic communication systems will provide secure, flexible, expedient, reliable, and continuous communications to HHQ as well as adjacent, subordinate, attached, and supported units. The primary method of communications is radio. Alternate methods of



LEGEND	
F	force
HQ	headquaters
S-1	personnel section
S-2	intelligence section
S-3	operations section
S-4	logistics section
S-6	communications system section
OPCON	operational control
ADCON	administrative control

KEY

OPCON

ADCON

Figure 2-1. Reconnaissance Battalion.

communications are by wire (to include voice and data network transmissions), messenger, and visual.

Intelligence. The S-2 section provides intelligence support to the battalion headquarters, as well as subordinate and supported units, through the direction, planning, collection, limited production, and dissemination of mission-oriented intelligence products. Information and intelligence collected during operations is expeditiously forwarded to HHQ for processing. Higher headquarters passes intelligence to the reconnaissance battalion which is utilized and disseminated to subordinate units by the S-2 section.

Administrative Capabilities. The H&S company, with assistance provided from the H&S company, MARDIV, provides administrative support for the entire battalion.

Sustainment

The reconnaissance battalion is largely dependent upon the H&S company, headquarters battalion, MARDIV for its sustainment. Sustainment support for the reconnaissance battalion is as follows:

- *Maintenance*. Operator maintenance (organizational) on all organic equipment. The battalion is also capable of performing intermediate maintenance on all dive and parachute equipment, to include overhaul and rebuild of end items and modular components, and, when directed, the manufacture or fabrication of items not provided or available.
- *Supply*. The supply section is capable of providing organic supply and maintenance management support for the entire battalion.
- *Transportation*. The transport section provides light motor transport support for limited organic transportation of the entire battalion. Other transportation support is provided by division and MEF organizations.
- *General Engineering*. The battalion has no organic general engineering capabilities. Limited general engineering support is provided by the combat engineering battalion, with full general engineering support provided by the Marine logistics group (MLG).
- *Services*. Limited postal and legal services are provided by the battalion, with assistance provided by the H&S company, headquarters battalion, MARDIV. Full disbursing, postal, exchange, legal, and civil affairs services are provided by the MLG.
- *Messing*. Food service support is provided by H&S company, headquarters battalion, MARDIV in garrison. The battalion will have a limited field messing capability.
- *Health Services*. The medical section provides preventive medicine, treatment for minor illnesses and injuries, and emergency lifesaving for battle and non-battle casualties. Injured and sick persons requiring hospitalization are readied and evacuated to the rear.

Reconnaissance Battalion Corpsmen Roles and Responsibilities

Reconnaissance battalions require reconnaissance qualified medical personnel (US Navy corpsmen) who are trained and certified to perform paramedical skills under austere combat conditions. These Fleet Marine Force reconnaissance corpsmen and Fleet Marine Force reconnaissance independent duty corpsmen (IDCs) are referred to as special amphibious reconnaissance corpsmen. They are trained to the same degree as the reconnaissance Marines within the unit's reconnaissance platoons. Although capable of filling leadership billets within the platoon and company, reconnaissance corpsmen and IDCs are not typically employed in this manner due to their primary duties as a healthcare providers.

Reconnaissance corpmen are highly trained medical personnel that must be located on the ground with reconnaissance patrols to be able to support them fully. They are best employed when attached to reconnaissance patrols during operations and pushed forward rather than kept in the rear area. During operations, a reconnaissance corpman would ideally be attached to every reconnaissance patrol being employed. If there are not enough corpsmen to accompany every patrol, the reconnaissance corpmen should be employed according to METT-T [mission, enemy, terrain and weather, troops and support available-time available] and the following considerations: (1) attached to the patrol that is most likely to make contact with the enemy and (2) attached to the patrol that is the deepest (time or distance) from reinforcement or medical evacuation.

The reconnaissance corpsmen are required to provide advanced trauma tactical care, combat trauma management, advanced life support, advanced airway management, vehicle extraction/ extrication, advanced cardiac life support, minor surgical procedures, hyperbaric medicine, military evacuation procedures, and other routine and emergency medical health care procedures while engaged in DA and/or extended duration reconnaissance operations.

The reconnaissance IDCs are required to provide the same level of care as the reconnaissance corpsmen with the addition of advanced surgical procedures, regional anesthesia, regional medical planning, coordinated mass casualty support, laboratory procedures, radiology procedures, and conduct of a long-term, village-based medical aid station.

Individual skills required of these corpsmen/IDCs include advanced tactical casualty care procedures including cold weather and mountain medicine, and remote casualty care with intravenous pain management and drug therapy (reconnaissance corpsmen threshold of 96 hours without augmentation or casualty evacuation [CASEVAC] and reconnaissance IDC threshold beyond 96 hours without augmentation or CASEVAC). Other individual skills required of reconnaissance corpsmen/IDCs include: individual combat and reconnaissance tactics, mountaineering, combatant diving, high altitude parachuting, helicopter insertion/extraction qualifications, and capable of integration and transparency with theater SOF and combat search and rescue (CSAR) assets.

Reconnaissance corpmen/IDCs are required to instruct and advise operational personnel in prevention and treatment measures of illnesses and injuries associated with combat swimming, open- and closed-circuit combatant diving, MFF parachuting, and amphibious, cold weather, high altitude, desert, and tropical environments.

Subordinate Organizations

The reconnaissance battalions are composed of two organic subordinate organizations: the H&S company and the reconnaissance company.

The mission of the H&S company is to provide the reconnaissance battalion commander with the means to effectively command and control, and coordinate the sustainment of subordinate and attached units in order to enable the battalion to conduct amphibious and ground reconnaissance operations.

The mission of the reconnaissance company is to conduct AFO, amphibious reconnaissance, underwater reconnaissance, ground reconnaissance, surveillance, battlespace shaping, and specialized limited scale raids in support of the GCE and its subordinate elements.

RECONNAISSANCE COMPANY

The primary mission of the reconnaissance company is to conduct amphibious reconnaissance, ground reconnaissance, surveillance, battlespace shaping, and specialized limited scale raids in support of the MARDIV and its subordinate elements, or a designated MAGTF.

The reconnaissance company typically employs platoons and/or teams to conduct reconnaissance operations to satisfy the intelligence requirements (IRs) of supported units. The company can be employed as an element of the reconnaissance battalion in general or direct support, or attached to a maneuver element, typically a regiment. The company headquarters will establish a ROC with connectivity to the supported unit's combat operations center (COC) to conduct C2 functions of subordinate units.

The company also employs platoons to conduct battlespace shaping and raid operations in support of the supported unit's concept of operations. Platoons can be task-organized and attached to maneuver elements of the MARDIV, typically a battalion. Under such employment, the platoon headquarters will establish and maintain a ROC with connectivity to the supported unit's COC.

Concept of Employment

With the assistance of a small company headquarters, the company commander analyzes missions, develops and considers COAs, and directs and supervises the operation of the company.

The company headquarters, in consonance with the supported unit, plans, coordinates, directs and employs the reconnaissance actions of platoons and teams in support of the GCE commanders. The company can be employed as an element of the reconnaissance battalion in general or direct support, or attached to a maneuver element such as an infantry regiment, tank battalion, or light armored reconnaissance battalion. Selected billets maintain the capability for insertion by static line, MFF parachuting, and combatant diving.

The company headquarters will establish and maintain a ROC at the supported unit's COC to conduct C2 functions of subordinate units. Platoons can be task-organized and attached to maneuver elements of the MARDIV. Under such employment, the platoon headquarters will establish and maintain a ROC at the supported unit's COC.

When task organized, the company headquarters provides the organic capability to maintain a ROC with connectivity to the supported unit's COC to function as the operations, information, and coordination center for all ground reconnaissance units during sustained operations. The company headquarters can be utilized to augment personnel from the H&S company, reconnaissance battalion to maintain a ROC at the supported unit's COC during sustained operations. If the company deploys with a HHQ command group that uses a SARCC, the ROC will either provide liaison to, or integrate with the SARCC.

During employment, the capabilities of a reconnaissance company include—

- *Firepower.* The organic firepower of the company consists of individual weapons; grenade launchers; light, medium, and heavy machine guns; sniper rifles; and target designation systems for the delivery of precision guided munitions.
- *Mobility.* The company is capable of motorized, foot mobile, small boat, combatant swimmer/diver, and airborne operations across all operational environments. The company is capable of conducting specialized environmental mobility (mountain, jungle, cold weather). The company and its subordinate elements are readily transported by boats, tracked vehicles, helicopters, amphibious ships, landing craft, and tactical/strategic aircraft.

- *Communications*. Organic communication systems will provide secure, flexible, redundant, reliable, and continuous communications to HHQ as well as adjacent, subordinate, attached, and supported units.
- *Intelligence*. The S-2 section of the H&S company, reconnaissance battalion and the supported unit provides intelligence support to the company headquarters and subordinate and supported units through the direction, planning, collection, limited production, and dissemination of mission-oriented intelligence products. Information and intelligence collected during operations is expeditiously forwarded to HHQ for processing.
- *Administrative Capabilities*. The company is dependent on H&S company, reconnaissance battalion for administrative support.

Command

The reconnaissance company is an organic element of the reconnaissance battalion under the OPCON of the MARDIV commander, subordinate division elements, or a designated MAGTF. The company employs organic tactical radios to maintain communications with HHQ as well as adjacent, subordinate, attached, and supported units.

Sustainment

The reconnaissance company is largely dependent upon the H&S company, reconnaissance battalion for its sustainment. Sustainment support for the reconnaissance company is as follows:

- *Maintenance*. The company is capable of operator maintenance on all organic equipment. The company is dependent on H&S company, reconnaissance battalion for operator maintenance on all SPIE, parachute, and dive equipment.
- *Supply*. The supply section of H&S company, reconnaissance battalion is capable of providing organic supply and maintenance management support for the company. Supply and resupply are provided by supported units.
- *Transportation*. The motor transport section of H&S company, reconnaissance battalion provides light motor transport for limited organic transportation of the company.
- *General Engineering*. The company has no organic general engineering capability. The MLG provides general engineering support.
- *Health Services*. Company special amphibious reconnaissance corpsmen, special amphibious reconnaissance IDC, and the medical section of H&S company, reconnaissance battalion provide preventive medicine, treatment for minor illnesses and injuries, and emergency lifesaving for battle and non-battle casualties. Injured and sick persons requiring hospitalization are readied and evacuated to the rear.
- *Services*. Limited postal and legal services are provided by H&S company, reconnaissance battalion and by H&S company, headquarters battalion, MARDIV. Full disbursing, postal, exchange, legal, and civil affairs services are provided by the MLG.
- *Messing*. Food service support if provided by H&S company, headquarters battalion, MARDIV in garrison.

Subordinate Organizations

The reconnaissance companies are composed of two organic subordinate organizations: the headquarters element and the reconnaissance platoon.

The mission of the headquarters element is to provide the reconnaissance company commander with the means to effectively command and control, and coordinate the sustainment of subordinate and attached units in order to enable the company to conduct amphibious and ground reconnaissance operations.

The mission of the reconnaissance platoon is to conduct AFO, amphibious reconnaissance, underwater reconnaissance, ground reconnaissance, surveillance, battlespace shaping, and specialized limited scale raids in support of the GCE and its subordinate elements.

RECONNAISSANCE PLATOON

The base tactical unit of the reconnaissance battalion is the reconnaissance platoon. Platoons normally consist of three reconnaissance teams and a headquarters team, but they are capable of providing task-organized forces as required.

The team leaders (TLs) are sergeants (E-5), the platoon sergeant is a gunnery sergeant (E-7), and the platoon commander is a first lieutenant (O-2/necessary military occupational specialty [NMOS] 0307), as stated by the table of organization (TO). The reconnaissance platoon is composed of 1 officer, 21 enlisted Marines, and 1 Navy corpsman for a total strength of 23 personnel.

All of the billets within a reconnaissance platoon are coded for the military occupational specialty (MOS) of 0326 (enlisted) or 8026 (officers): reconnaissance man, parachute and combatant diver qualified. All members in a reconnaissance platoon should be graduates of the Basic Reconnaissance Course (BRC), the TLs should be graduates of the Reconnaissance Team Leaders Course (RTLC), and the platoon sergeant and platoon commander should be graduates of the Reconnaissance Unit Leaders Course (RULC). (For more information on the recruitment, assessments, and selection of reconnaissance platoon members, refer to app. A.)

All platoon members should have the following qualifications: basic airborne, Marine combatant diver (MCD), MFF parachutist, and survival, evasion, resistance, and escape (SERE) Level C. The platoon should have a variety of personal qualifications within the reconnaissance teams and headquarters team including sniper, jump master, US Army Pathfinder, and US Army Ranger qualified individuals. Additionally each platoon will have a minimum of one joint terminal attack controller (JTAC) and each team will have a minimum of one joint fires observer (JFO). (For information on how to prepare the force to conduct ground reconnaissance operations, refer to app. B.)

Characteristics

Reconnaissance platoons and their inherent teams possess the following characteristics when conducting operations:

- Provide persistent, all weather reconnaissance and/or surveillance of an objective that can only be covered intermittently by most other systems.
- Avoid contact with enemy forces and local population, unless the mission otherwise demands it.
- Firepower is generally limited to small arms, grenades, and claymore mines when dismounted.

- Possess limited organic ground mobility assets.
- Depend on an expert knowledge of digital high frequency (HF), very high frequency (VHF), ultrahigh frequency (UHF), and tactical satellite (TACSAT) communications equipment as a means of reporting.
- Rely on a thorough understanding of enemy TTP, order of battle, and practiced skills in identifying equipment to successfully accomplish their mission.
- Rely upon stealth, cover, concealment, infantry, and sniper patrolling skills to remain undetected.
- Equipment and supplies include only what can be man packed or cached when operating dismounted.

Capabilities

When properly equipped, reconnaissance platoons are fully self-mobile once deployed to an AO. Reconnaissance platoons are capable of—

- Establishing long-range digital communications using HF or TACSAT radio systems.
- Transmitting information via voice and data.
- Conducting preplanned or emergency resupply operations to extend their mission duration.
- Operating in inclement weather and on difficult terrain that is inaccessible to other forces.
- Evading on order from HHQ or due to enemy action.
- Blending into the environment by employing the concepts of camouflage through—
  - Incorporating themselves into units or formations who have already established a presence, including indigenous or host nation (HN) personnel/forces.
  - Using clandestine cameras and sensors.
  - Establishing hide sites and clandestine observation posts (OPs).
- Infiltrating an area over land (mounted or dismounted), over water (small boat or combat swimming), and by air (helicopterborne).
- Conducting extract from an area over land, over water, by air, or by conducting link up with advancing forces.
- Conducting special insertion and extraction techniques that include: HRST, parachute operations (static line and MFF), waterborne operations (open-/closed-circuit diving, submarine deployment, and helocasting).
- Designating and engaging selected targets with organic weapons and force fires to support battlespace shaping.
- Operating with the use of ground mobility assets and, if resupply is available, conducting extended range and duration reconnaissance missions.
- Conducting dismounted operations for a minimum of 96 hours with little or no external direction or support.

Limitations

The reconnaissance platoons have the following limitations:

- Require additional support in the areas of fires, communications, parachute rigging, transportation, logistics, intelligence, and operations planning in order to provide a full range of operational capability.
- Lightly armed and have limited self-defense capabilities when dismounted.
- Require additional support from the reconnaissance battalion, GCE, or MAGTF S-2 and S-3 in the following areas:
  - Intelligence products.
  - Integrated area communications.
  - Access to common user telephone systems.
  - Frequency management.
  - Satellite communications channel access.
  - Embarking/disembarking of supplies and equipment.
  - Transportation to the AO.
  - Maintenance, supply, mess, administration, finance, personnel, CASEVAC, and chaplain services.
- Require additional consideration to the impacts of terrain, weather, and enemy situation on personnel and equipment in terms of endurance and fatigue.
- The tactical situation, equipment limitations, or enemy electronic surveillance or jamming may prevent reconnaissance platoons and teams from maintaining continuous communications with the controlling headquarters.

MISSION OF FORCE RECONNAISSANCE COMPANY

The primary mission of the FORECON companies, or elements thereof, is employed to observe, identify, and report intelligence information on the enemy, weather, and terrain.

Force reconnaissance Marines normally operate under the staff cognizance of the intelligence support coordinator (ISC) of the MAGTF G-2/S-2 for reconnaissance and surveillance missions and under the staff cognizance of the MAGTF G-3/S-3 for offensive missions. When required by the situation, the FORECON company or detachments may be placed in direct support to smaller MAGTFs or to MEF major subordinate commands (MSC) other than the command element. The FORECON companies maintain the capability to perform some special operations capable tasks in support of MAGTF and joint operations.

Force reconnaissance platoons and teams conduct AFO, amphibious reconnaissance, underwater reconnaissance, ground reconnaissance, surveillance, battlespace shaping, and raids in the supported commander's area of interest (AOI).

These operations often take place well beyond the range of MAGTF supporting arms and in the vicinity of the enemy's operational reserve, staging and marshaling areas, and key lines of communications to collect and report information in response to the commander's priority intelligence requirements (PIR) and IRs, as well as support intelligence collections and dissemination plans.

ORGANIZATION OF THE FORCE RECONNAISSANCE COMPANY

The FORECON company plans, coordinates, and conducts ground combat operations and other tasks as directed by the MEF or supported unit commander. The FORECON company, in consonance with the supported unit, plans, coordinates, and directs the reconnaissance actions of platoons and teams in support of the MEF, MAGTF, and other JTFs.

Concept of Employment

With the assistance of a small company headquarters, the company commander analyzes missions, develops and considers COAs, makes decisions, issues orders, and directs and supervises the operation of the company. The FORECON company can be employed as an element of the MEF in general and direct support, or attached to a maneuver element, such as a MEF MSC. The company headquarters will establish and maintain a ROC at the supported unit's COC to conduct C2 functions of subordinate units. Platoons can be task-organized and attached to maneuver elements of the MEF. Under such employment, the platoon headquarters will establish and maintain a ROC at the supported unit's COC. Selected billets maintain the capability for insertion by static line, MFF parachuting, and combat diving.

When task-organized, the company headquarters, augmented by personnel and equipment of the reconnaissance battalion headquarters, provides the organic capability to maintain a ROC with connectivity to the supported unit's COC to function as the operations, information, and coordination center for all ground reconnaissance units during sustained operations. The company headquarters can be utilized to augment personnel from the H&S company, reconnaissance battalion to maintain a ROC at the supported unit's COC during sustained operations. If the company deploys with a HHQ command group that uses a SARCC, the ROC will either provide liaison to, or integrate with, the SARCC.

During employment, the firepower, mobility, and administrative capabilities of the FORECON companies are the same as the reconnaissance companies. The FORECON Company S-6 provides organic communication systems and capabilities. The FORECON Company S-2 provides intelligence support to FORECON headquarters and platoons.

The platoons originating from the FORECON companies provide the primary means of ground reconnaissance for the MEF, MAGTF, and other JTF as directed. Force reconnaissance Marines are selected from among the reconnaissance battalion's most mature and experienced noncommissioned officers (NCOs). They undergo a rigorous selection and training process before being assigned to the company.

The Marine Corps' active duty FORECON companies are located in I, II, and III MEF. These companies consist of four FORECON platoons and an H&S platoon (see fig. 2-2). The Marine Forces Reserve are responsible for providing trained and qualified individuals for active duty service from 3d and 4th Force Reconnaissance Companies in times of war, national emergency, or in support of contingency operations. Marine Forces Reserve also provides personnel and operational tempo relief for active component forces during times of peace.

Sustainment

The FORECON company is largely dependent upon the H&S company, reconnaissance battalion for its sustainment. Sustainment support for the FORECON company is as follows:

- *Maintenance*. The FORECON company is capable of operator maintenance (organizational) on all organic equipment.
- *Supply*. The supply section of the H&S company, reconnaissance battalion is capable of providing organic supply and maintenance management support for the company. Supply and resupply are provided by the supported units.
- *Transportation*. The motor transport section of the H&S company, reconnaissance battalion provides light motor transport support and medium tactical vehicle support for limited organic transportation of the company.
- *General Engineering*. The company has no organic general engineering capabilities. The MLG provides full general engineering support.

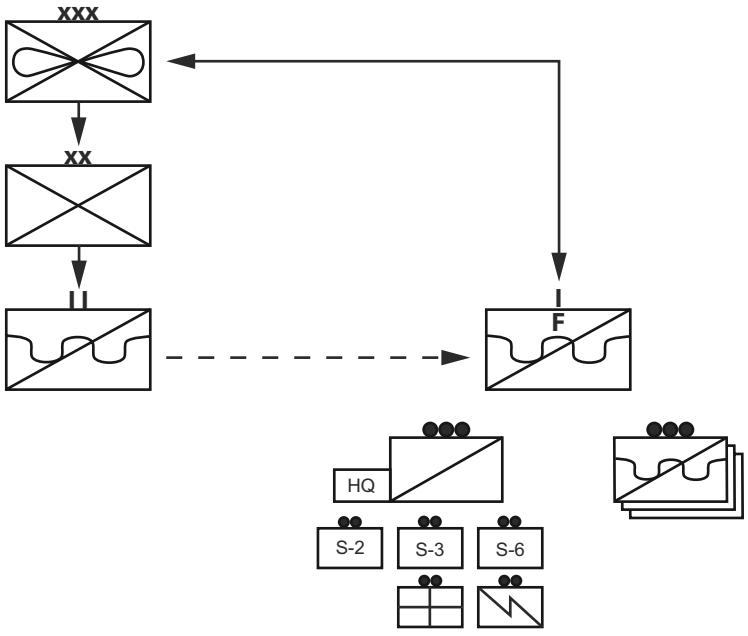


Figure 2-2. Force Reconnaissance Company.

- *Health Services*. The medical section of the H&S company, reconnaissance battalion provides preventive medicine, treatment for minor illnesses and injuries, and emergency lifesaving for battle and non-battle casualties. Injured and sick persons requiring hospitalization are readied and evacuated to the rear. The FORECON companies have the same medical support requirements as the reconnaissance battalion. The special amphibious reconnaissance corpsmen and IDCs fill this requirement and are employed in the same manner.
- *Services*. Limited postal and legal services are provided by the battalion, with assistance provided by the H&S company, headquarters battalion, MARDIV. Full disbursing, postal, exchange, legal, and civil affairs services are provided by the MLG.
- *Messing*. Food service support is provided by H&S company, headquarters battalion, MARDIV in garrison. The battalion will have a limited field messing capability.

Subordinate Organizations

The FORECON companies are composed of two organic subordinate organizations; the H&S element and the FORECON platoons.

The mission of the H&S element is, in consonance with the supported unit, to plan, coordinate, and direct the reconnaissance actions of the teams and platoons.

The mission of the FORECON platoon is to conduct amphibious reconnaissance, underwater reconnaissance, ground reconnaissance, battlespace shaping, and surveillance to observe, identify, and report enemy activity, and to collect other information of military significance. The FORECON platoons, when properly tasked organized with other forces, will assist in specialized engineer, mobile, and other unique reconnaissance missions.

FORCE RECONNAISSANCE PLATOON

The base tactical unit of the FORECON company is the reconnaissance platoon. Platoons normally consist of three reconnaissance teams and a headquarters team, but they are capable of providing task-organized forces as required.

The platoon commander is a captain (O-3/NMOS 0307) and is preferred to be a graduate of the Expeditionary Warfare School, the platoon sergeant is a gunnery sergeant (E-7), and the TLs are staff sergeants (E-6), as stated by the TO. The FORECON platoon is composed of one officer, 21 enlisted Marines, and 1 Navy corpsman for a total strength of 23 personnel.

All of the billets within a FORECON platoon are coded for the MOS of 0326 (enlisted) or 8026 (officers); reconnaissance man, parachute and combatant diver qualified. All members in a reconnaissance platoon should be graduates of the BRC, the TLs should be graduates of the RTLC, and the platoon sergeant and platoon commander should be graduates of the RULC.

All platoon members should have the following qualifications: basic airborne, MCD, MFF parachutist, and SERE Level C. The platoon should have a variety of personal qualifications within the reconnaissance teams and headquarters team including sniper, jump master, US Army

Pathfinder, and US Army Ranger qualified individuals. Additionally, each team will have a minimum of one JTAC and one JFO.

The characteristics, capabilities, and limitations of the force reconnaissance platoons are the same as those of the reconnaissance platoons. For a detailed list, refer back to the "Reconnaissance Platoon" section.

CHAPTER 3
COMMAND AND CONTROL

Command and control is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.

Further defining of command and control can be found in JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*. This chapter describes how reconnaissance operations depend on effective command and control, command and support relationships, and the need for communications, computers, and intelligence for effective command and control of reconnaissance units.

COMMAND AND CONTROL

A MAGTF can conduct reconnaissance using one of two basic methods—reconnaissance push and reconnaissance pull.

Operations based on reconnaissance push use reconnaissance elements more conservatively. They are often used as a tactical resource and generally with a shorter timeline. Reconnaissance push uses reconnaissance forces as the lead element of preplanned tactical operations, detecting enemy dispositions during the movement of the entire friendly force. During Operation Desert Storm in 1991, I MEF operations were characterized by reconnaissance push. Reconnaissance forces, assisted by combat forces patrolling aggressively, located Iraqi forces (to include the counterattack by the Iraqi 5th Mechanized Infantry Division from the Burqan oil field) forward of advancing friendly forces in enough time to prevent the Iraqi forces from interfering with I MEF operations. Reconnaissance push is more often used when the MAGTF is following a predetermined COA, targeting and destruction of enemy forces is a priority, freedom of maneuver is limited, and usually when on the defense.

In operations based on reconnaissance pull, information derived from reconnaissance forces guides friendly force activities. The landing at Tinian during World War II is an example of reconnaissance pull. Amphibious reconnaissance determined that the Japanese defenders had largely ignored the northern beaches, while focusing most of their defensive effort on the most likely beaches in the southwest. The landing was changed to the northern beaches and, when coupled with a deception operation off of the southern beach, resulted in a complete surprise. Reconnaissance pull is preferred when the MAGTF can maneuver freely and exploit the enemy

weaknesses located by reconnaissance forces. (For further information on reconnaissance push and pull, see MCDP 1-0.)

RECONNAISSANCE EMPLOYMENT

The approach to reconnaissance employment that best supports maneuver warfare and operational maneuver from the sea (OMFTS) is reconnaissance pull. In operations based on reconnaissance pull, reconnaissance forces are used as operational-level assets.

Reconnaissance elements identify the surfaces and gaps in overall hostile dispositions and permit the commander to shape the battlespace. Making rapid decisions based on the flow of reconnaissance information, friendly combat forces are drawn to and through the weak spots in the enemy defense and seek to quickly exploit the advantages gained. Reconnaissance pull requires the following:

- Early commitment of reconnaissance elements.
- Allowance for the time necessary to fully develop the reconnaissance picture.
- A smooth flow of information from the reconnaissance elements directly to the supported commanders and staff at the MAGTF/GCE and those units in immediate need of reconnaissance data.
- A high tempo of operations to exploit the information in real-time.

COMMAND AND SUPPORT RELATIONSHIPS

Command relationships and levels of authority, although authoritative, must be adapted to the mission's requirements. Commanders must be able to establish nonstandard relationships when required by the situation. Collectively, command relationships and levels of authority provide the flexibility necessary to organize forces to respond to all situations.

Command relationships foster understanding and freedom of action, and establish the basis for interaction among unit commanders. When a Marine Corps unit is under the command of a senior Marine Corps unit, the subordinate Marine Corps unit is either organic or attached. If organic, a unit is assigned to and forms an essential part of a military organization. If attached, a unit or personnel are temporarily placed in an organization. When a Marine Corps unit is in a support relationship, one element or unit of the MAGTF provides a required capability to another element.

The command and support relationships used to assign missions to subordinate units in the MEF are either command or various support relationships. During operations, ground reconnaissance units are employed under the staff cognizance of the G-3/S-3 and in accordance with the intelligence concept of operations and plans developed by the ISC and approved by the MEF assistant chief of

staff for intelligence (AC/S G-2). The principal operational C2 relationships are general support, direct support, and attached. (Refer to table 3-1.)

Table 3-1. Command and Support Relationships and Responsibilities.

If the relationship is:	Then inherent responsibilities:							
	Have command relationship with:	May be task-organized by:	Receives sustainment from:	Are assigned position or an AO by:	Provide liaison to:	Establish and or maintain communications with:	Have priorities established by:	Can impose on gaining unit further command or support relationship by:
Direct support [1]	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Parent unit; supported unit	Supported unit	See note[1]
Reinforcing	Parent unit	Parent unit	Parent unit	Reinforced unit	Reinforced unit	Parent unit; reinforced unit	Reinforced unit; then parent unit	Not applicable
General support–reinforcing	Parent unit	Parent unit	Parent unit	Parent unit	Reinforced unit and as required by parent unit	Reinforced unit and as required by parent unit	Parent unit; then reinforced unit	Not applicable
General support	Parent unit	Parent unit	Parent unit	Parent unit	As required by parent unit	As required by parent unit	Parent unit	Not applicable
If the relationship is:	Then inherent responsibilities:							
	Have command relationship with:	May be task-organized by: 2	Unless modified, ADCON responsibility goes through	Are assigned position or AO by:	Provide liaison to:	Establish/ maintain communications with:	Have priorities established by:	Can impose on gaining unit further command or support relationship of:
Organic	All organic forces organized with the HQ	Organic HQ	Army HQ specified in organizing document	Organic HQ	N/A	N/A	Organic HQ	Attached; OPCON; TACON, GS; GSR; R; DS
Assigned	Combatant command	Gaining HQ	Gaining Army HQ	OPCON chain of command	As required by OPCON	As required by OPCON	ASCC or Service-assigned HQ	As required by OPCON HQ
Attached	Gaining unit	Gaining unit	Gaining Army HQ	Gaining unit	As required by gaining unit	Unit to which attached	Gaining unit	Attached; OPCON; TACON, GS; GSR; R; DS
OPCON	Gaining unit	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ1	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON; TACON; GS; GSR; R; DS
TACON	Gaining unit	Parent unit	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	TACON; GS; GSR; R; DS

Notes:

[1] Commanders of units in direct support may further assign support relationships between their subordinate units and elements of the supported unit after coordination with the supported commander.

[2] In NATO, the gaining unit may not task-organize a multinational force. (See TACON.)

Legend:

ASCC Army Service component command
DS direct support
GS general support
GSR general support–reinforcing
HQ headquarters
N/A not applicable
NATO North Atlantic Treaty Organization
R reinforcing
TACON tactical control

General Support

A unit assigned under a general support command relationship supports the organization as a whole and stays under the command of the parent unit.

The general support mission enhances total force operational flexibility and makes the supporting unit immediately responsive to the needs of the organization as a whole. General support is the most centralized form of support and is used when scarce resources must be available to the force as a whole and cannot be committed to any one subordinate unit. Under general support, ground reconnaissance units are tasked by the commander through the G-3/S-3, who exercises staff cognizance.

The operation order (OPORD) originates from the commander through the G-3/S-3 and is augmented with the mission folder containing inputs from the intelligence and operations sections. The intelligence section validates the IRs, develops reconnaissance and surveillance tasks, and matches unit capabilities to the requirements. The intelligence section then makes recommendations to the operations section. The operations section deconflicts operations and task the subordinate elements with their mission.

The owning-unit (MEF, division, regiment, battalion) commander and staff are usually best equipped to determine the optimal use of ground reconnaissance assets at any given time, provide the necessary support to ground reconnaissance elements, and disseminate the results of reconnaissance to user units.

Direct Support

Task-organized ground reconnaissance units or detachments may be placed in direct support of a subordinate commander. This focuses intelligence and ground reconnaissance support for particular phases of an operation or creates enhanced intelligence operations nodes in support of subordinate elements. A ground reconnaissance unit or element operating in direct support of another unit is concerned primarily with responding to the IR, intelligence, and operational needs of the supported unit. The ground reconnaissance unit is authorized to respond directly to requests by the supported unit and may undertake other missions only if they do not interfere with support of the supported unit.

Occasionally, it is appropriate to place ground reconnaissance assets in direct support of a subordinate element. For example, direct support is often appropriate when maneuver units conduct a reconnaissance in force or an armed reconnaissance.

Attached

When MAGTFs below MEF size are deployed, task-organized companys or platoons from a ground reconnaissance unit will normally be attached to the MAGTF's command element. For example, a force reconnaissance platoon is usually attached to the MEUcommand element. A battalion reconnaissance platoon is normally attached to the H&S company of a battalion landing team.

Due to the nature of maneuver warfare, ground reconnaissance units will most likely be employed in rapidly developing and fluid situations. The main effort may shift suddenly from one subordinate element to another.

Such situations often require modifications or complete changes in ground reconnaissance elements' missions, or cause other changes affecting important details such as insertion and extraction plans, schedules, means of transportation, or reconnaissance techniques.

In general, attached and direct support relationships limit the overall operational and intelligence flexibility of the commander and makes for inefficient use of ground reconnaissance forces. Therefore, ground reconnaissance units are best employed in general support at the owning-unit level.

Ground reconnaissance units may be attached (short term) to a specific unit for the accomplishment of a particular mission. Normally, reconnaissance units or personnel that are attached will be under the command of the gaining unit commander with command and control exercised via the operations officer's staff cognizance. Administrative, combat service support, and other support may or may not be under the responsibility of the gaining unit commander. The attachment orders must specify the full scope of operational C2 authority and support retained by the parent unit or passed to the gaining unit.

COMMAND, CONTROL, AND COORDINATION

The intelligence operations center (IOC) at the MEF command element is the principal MAGTF intelligence C2 and operations node that provides the facilities and infrastructure for the centralized direction of the MEF/GCE comprehensive intelligence, counterintelligence (CI), and reconnaissance operations.

Since the IOC must effectively support the entire MEF/GCE intelligence and reconnaissance efforts, it must remain responsive to the requirements of all elements of the MAGTF. In supporting this objective, the IOC integrates and supports the G-2 section and intelligence battalion, ground reconnaissance assets, and other organic and supporting intelligence and reconnaissance operations.

While integrated, the organizational approach differs between two key components of the IOC: the command element's G-2 section and the intelligence operations center (see fig. 3-1).

G-2/S-2 Section

The G-2/S-2 section develops and answers outstanding unit and subordinate units' PIRs and IRs by planning, directing, integrating, and supervising the organic and supporting intelligence, CI, and reconnaissance operations. The G-2/S-2 section—

- Plans the concept of intelligence and reconnaissance and operations for approval by the AC/S G-2 and subsequent implementation by the ISC based upon: mission, threat, commander's intent and guidance, concept of operations, and other factors related to METT-T.
- Recommends CI, force protection measures and countermeasures.

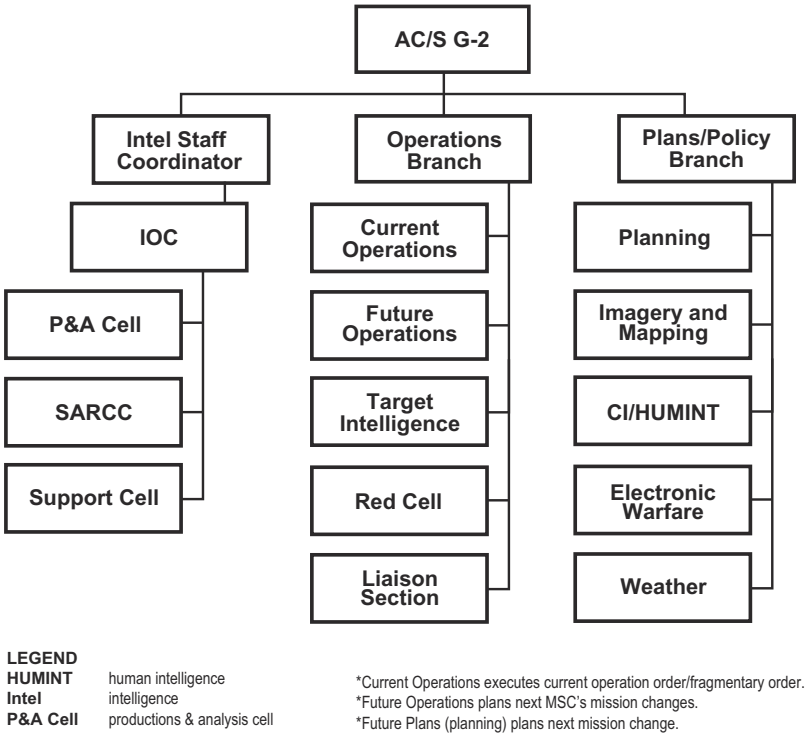


Figure 3-1. Combat Intelligence Center.

- Prepares appropriate intelligence and reconnaissance plans and orders to include reviewing, coordinating, and integrating the intelligence and reconnaissance plans of JTFs, theaters, and other organizations.
- Coordinates, provides, and facilitates the use of intelligence to the commanding general, the battle staff, the future plans cell, the future operations center, the current operations center, and the force fires coordination center.
- Plans, directs, and supervises liaison teams to external commands (e.g., the JTF and joint functional components headquarters) and other external intelligence and reconnaissance organizations.
- Coordinates and supervises the transition of intelligence and reconnaissance planning from G-2 plans to G-2 future operations, and from G-2 future operations to G-2 current operations, in order to effectively support MEF/GCE "single battle transition process."

Intelligence Operations Center

The IOC provides centralized direction for intelligence and reconnaissance operations under the staff cognizance of the AC/S G-2, which is executed via the intelligence support coordinator. The IOC is the core for this task, with key assistance from the G-2 plans and G-2 operations elements. (See fig. 3-2 on 3-7.) The IOC—

- Consolidates, validates, and prioritizes the IRs of the entire force. The combat intelligence center element responsible for this task is the collection management/dissemination section within the IOC support cell.
- Submits consolidated requests for external intelligence and reconnaissance support through the Marine component headquarters to the appropriate agencies. The combat intelligence center

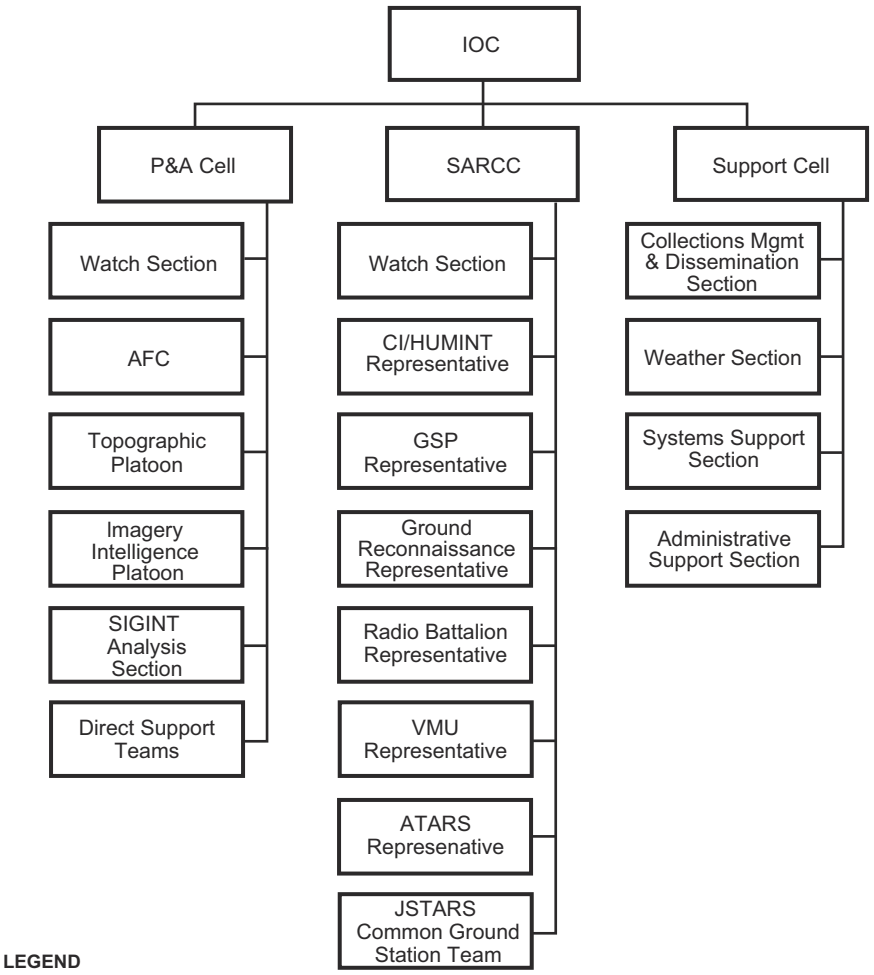


Figure 3-2. Intelligence Operations Center.

element responsible for this task is the collection management/dissemination section within the IOC support cell, with assistance from the production and analyis (P&A) cell and the G-2 operations branch.

- Allows the intelligence support coordinator to exercise, per AC/S G-2 cognizance, principal staff cognizance of organic and supporting intelligence, CI, and reconnaissance operations, to include SIGINT, imagery intelligence (IMINT), HUMINT, geographic intelligence, CI, measurement and signature intelligence (MASINT), ground reconnaissance, and aerial reconnaissance operations.
- Coordinates and manages the employment of organic intelligence and reconnaissance collections assets and operations through the IOC's SARCC. Within the SARCC will be representatives from most organic and supporting intelligence and reconnaissance units to provide command and control and reporting of ongoing intelligence operations.
- Maintains a consolidated, all-source intelligence production center in the IOC P&A cell. The other node with significant intelligence production involvement is the radio battalion's operational control analysis center. Additionally, support from ground reconnaissance units

may be required to effectively process, evaluate, integrate, interpret, and fuse information obtained from ground reconnaissance operations with other intelligence information to produce necessary all-source intelligence products. Similar to the collection management/ dissemination section, intelligence specialists from all intelligence disciplines generally are organic to the P&A cell.

- Links the command element to national, theater, joint, other services, and multinational intelligence and reconnaissance assets and operations. All intelligence battalion and G-2 section nodes have common and unique capabilities to perform critical tasks within this function. In addition to the command element common communication pathways provided by the communications battalion, the IOC generally will have unique intelligence communications capability, such as Trojan Spirit II.

SURVEILLANCE AND RECONNAISSANCE COORDINATION CENTER

The SARCC is the principal intelligence functional center for the supervision and deconfliction of intelligence and reconnaissance collection operations. It is responsible for the command and control, intelligence operations direction, coordination, monitoring, and reporting of ongoing and supporting collections operations and reporting.

The SARCC will be task-organized for an operation in accordance with METT-T requirements, the intelligence and reconnaissance concept of operations, intelligence and reconnaissance task organization, and command and control. The SARCC is generally composed of representatives and supporting communications information systems from all organic intelligence and reconnaissance units (see fig. 3-3 on page 3-9).

The location of the SARCC relative to other IOC and command element nodes will be determined by the situation; however, it is generally collocated with either the COC or the IOC support cell. At a minimum, the SARCC will maintain a SARCC liaison officer (LNO) in the COC.

The SARCC receives collection and operations orders from the IOC collection management/ dissemination officer (CM/DO). The SARCC officer in charge (OIC) and supporting representatives then develop reconnaissance and surveillance tasks and match unit capabilities to the requirements.

During the execution of collection operations, the SARCC receives intelligence and reconnaissance reporting activities of all deployed collection platoons/teams (e.g., ground reconnaissance teams or scout sniper teams) and supporting operations (e.g., UAS missions) from the COC. The SARCC also maintains the deployed collection units' status and the ongoing status of the missions.

Role of the SARCC

The SARCC provides the commander with enhanced situational awareness and coordination/ deconfliction of MAGTF intelligence, surveillance, and reconnaissance (ISR) operations. The SARCC supports the commander's concept of operation, integrates intelligence and

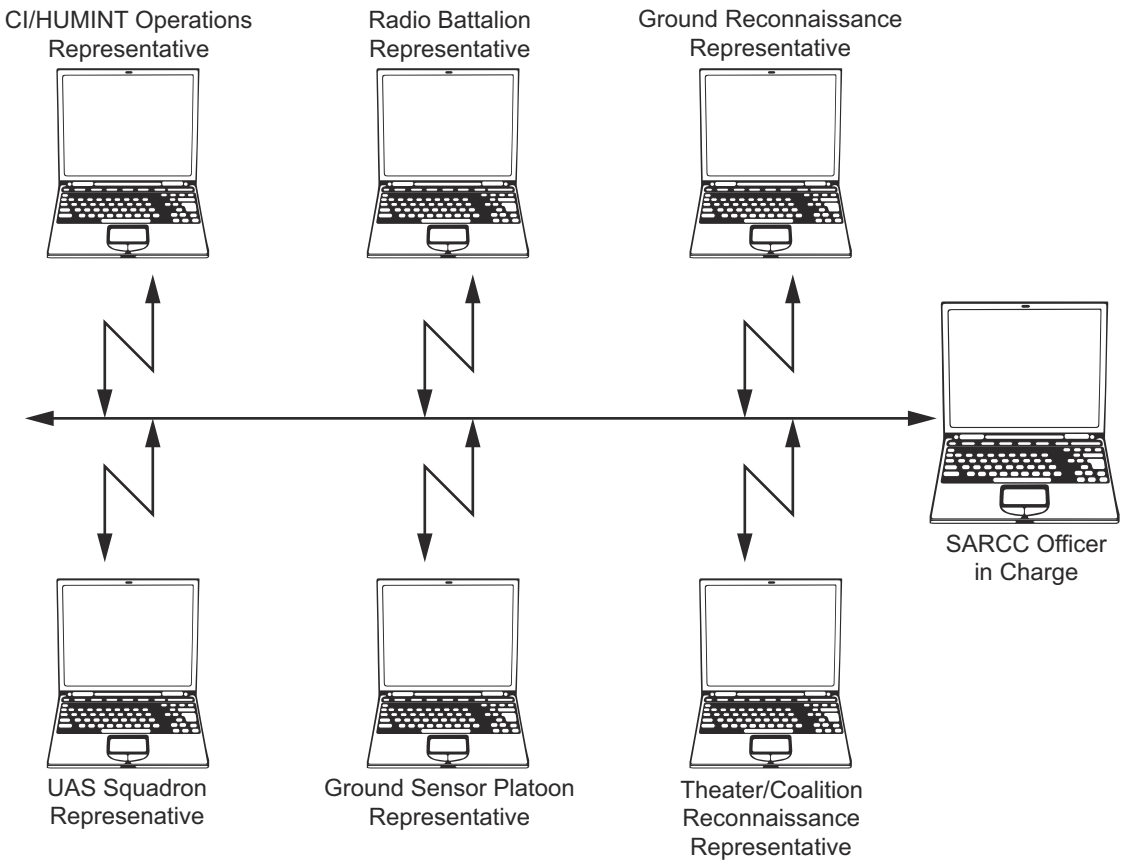


Figure 3-3. Surveillance and Reconnaissance Coordination Center.

reconnaissance collections with the scheme of maneuver, and sustains intelligence and reconnaissance support to on-going operations.

Supporting the Commander's Concept of Operation. Provides the commander understanding of the situation and environment by coordinating and deconflicting the employment of intelligence and reconnaissance units in the collection and assessment of current information on the enemy, terrain, weather, and other environmental matters.

Integrating Intelligence and Reconnaissance Collections with the Scheme of Maneuver. Integrating intelligence and reconnaissance support with the scheme of maneuver requires precise arrangement of coordinated activities in time, space, and purpose. Integration will ensure that the right collector is on the right target at the right time. Integration must occur within the SARCC, the COC, and across the warfighting functions.

Sustaining Intelligence and Reconnaissance Support. Ensures intelligence and reconnaissance support endurance and continuity. It involves the actions to achieve logistics sustainment and technical support for intelligence and reconnaissance units available to the commander.

Role of the MAGTF

Each MAGTF element has specific roles in coordinating intelligence and reconnaissance support. The command element implements the MAGTF commander's intent and normally focuses on

deep operations to shape the battlespace for the MSCs. The command element also provides intelligence and reconnaissance through the CI/HUMINT company, FORECON company, GSP, and radio battalion. The ACE provides intelligence and reconnaissance through unmanned aerial vehicle support, EW support, and offensive air support.

The GCE receives the majority of intelligence and reconnaissance support during Phase III-V. Intelligence and reconnaissance assets organic to the GCE include the light armored reconnaissance battalion and the reconnaissance battalion. The GCE SARCCs interact with the command element through the MAGTF SARCC. The MAGTF SARCC coordinates those matters that cannot be coordinated by SARCCs within the GCE and those matters that affect the MAGTF as a whole. The MAGTF SARCC coordinates intelligence and reconnaissance activities with higher, adjacent, and external commands.

Surveillance and Reconnaissance Coordination Center

A SARCC is a single location in which there are centralized communications facilities and personnel necessary for the coordination of all forms of intelligence and reconnaissance support.

A SARCC exists from the MAGTF command element to battalion levels. The SARCC OIC organizes and supervises the SARCC under the staff cognizance of the G-2/S-2. The number of personnel and amount of equipment varies with the level of command and responsibility, the size and complexity of the forces involved, the degree of planning and coordination required, and the desires of the commander.

All echelons of the GCE establish a SARCC as an advisory and coordinating agency. The SARCC is located in the tactical sensitive compartmented information facility with a liaison provided to the COC. Facilities, equipment, and material are provided by the parent headquarters. Supporting intelligence and reconnaissance units provide representatives and equipment to conduct coordination, targeting, and communications functions for their respective supporting assets as required.

Liaison Cell

The ground reconnaissance liaison cell is composed of ground reconnaissance personnel sent by the ground reconnaissance units to the MAGTF SARCC or to another supported unit's SARCC. The establishment and maintenance of this liaison function is to ensure the proper use of reconnaissance assets and products.

The liaison cell ensures complete and effective planning and coordination of the ground reconnaissance unit's receipt of mission tasking to the fielding of platoons/teams by the ground reconnaissance unit to fulfill the unit's mission and to ensure the complete reporting of all intelligence information collected by the platoons/teams in the field.

Normally located in the SARCC under the cognizance of the SARCC OIC, the liaison cell may be divided up and assigned to support several different centers at once or may be located with the COC. Wherever located, the liaison personnel are responsible for coordinating between all relevant cells, centers, and the ROC. Additional liaison and communications personnel may be assigned as needed.

The liaison cell is responsible for the coordination of all current, pending, and future missions with the MAGTF ISC, COC, and other relevant cells and centers. For current and near-term future operations, detailed coordination is a continuous function with the ISC support cell, P&A cell, G-3/S-3 current operations, and the fire support coordination center (FSCC). The liaison cell periodically coordinates with the G-2/S-2 future plans officer, the IOC CM/DO, and the G-3/S-3 future operations section to ensure that the ground reconnaissance unit commander is apprised of all ground reconnaissance employment plans being considered. This is critical to ensure that the unit provides relevant and timely COAs and estimates of supportability.

The duties of a ground reconnaissance LNO are to—

- Be familiar with the mission of each ground reconnaissance platoon, the concept of reconnaissance for future intelligence missions and tasks, and the overall scheme of maneuver for all friendly units.
- Be familiar with the enemy situation and all current estimated COAs.
- Know the current positions of all ground reconnaissance platoons/teams, their reconnaissance AOs, and any corresponding restrictive fire areas (RFAs) in effect.
- Review all message traffic during the past 24 hours and obtain copies, if necessary, before reporting to the MAGTF COC/IOC.
- Know the operational and communications information systems status of each platoon/team and any upcoming insertions or extractions. This includes exactly how many platoons/teams are available, how many are currently committed, how many are in reserve, last communications of all committed forces, and any communications problems.
- Ensure the maintenance of a map board and automated information databases depicting the current disposition of committed ground reconnaissance platoons/teams and all materials needed for command and control and record keeping. Maintain a journal log and copies of any requests.

GROUND COMBAT ELEMENT SURVEILLANCE AND RECONNAISSANCE COORDINATION CENTER

Division forces establish SARCCs for the coordination and integration of all intelligence and reconnaissance assets supporting the division's concept of operations. Liaison officers may be provided to these SARCCs by the supporting intelligence and reconnaissance units. (Refer to fig. 3-4 on page 3-12.)

Regimental SARCC

The regimental SARCC plans, coordinates, and integrates intelligence and reconnaissance to support the regiment's scheme of maneuver for current and future operations. The SARCC requests intelligence and reconnaissance support and plans/coordinates operations within the regiment's AO.

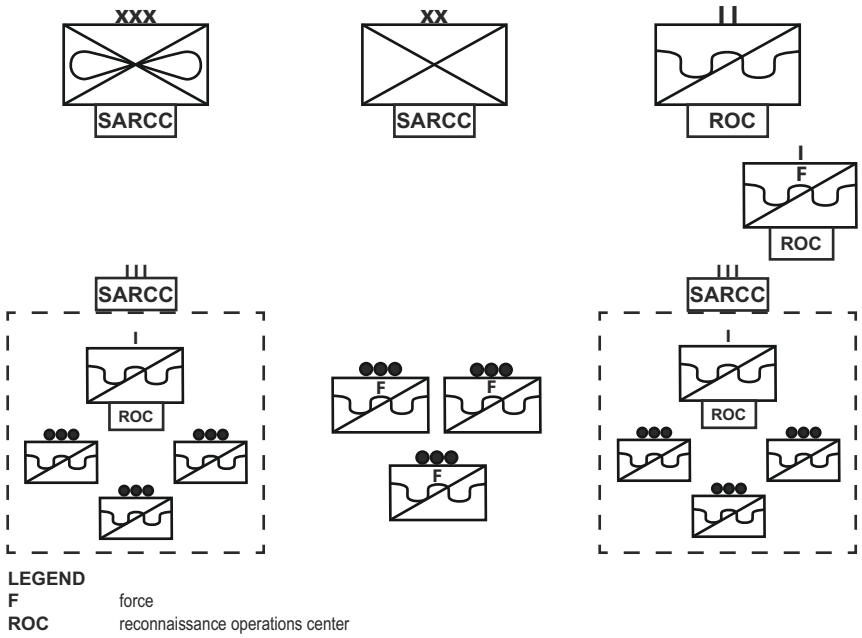


Figure 3-4. GCE Surveillance and Reconnaissance Coordination Centers.

The regimental SARCC allocates intelligence and reconnaissance assets to subordinate battalions and assists and supervises subordinate SARCCs. The regimental SARCC coordinates authorization of intelligence and reconnaissance operations that affect the regiment's AO. Normally, coordination will be conducted by subordinate battalions while the regiment monitors and effects coordination with higher, adjacent, and subordinate units, as required. Ingress and egress routes for all missions that impact the regiment's AO are coordinated by the regimental SARCC as well as the employment of all intelligence and reconnaissance operations in support of the regiment.

Battalion SARCC

The battalion SARCC performs intelligence and reconnaissance support coordination in terms of closely integrating multiple source collections with the scheme of manuever. It monitors and receives all intelligence and reconnaissance support requests orginiating within the battalion. The battalion SARCC ensures that supporting intelligence and reconnaissance operations are integrated with the scheme of maneuver and that friendly forces are not endangered. It may also coordinate missions for intelligence and reconnaissance assets outside of the battalion's zone of action that impact the battalion's mission.

Functions of the Senior SARCC in the GCE

The functions of the senior SARCC are as follows:

- Report pertinent information such as the location of friendly intelligence and reconnaissance units and reconnaissance AO to other staff sections of the MAGTF SARCC for further dissemination as required.
- Provide representation to the command element SARCC located in the landing force operations center during amphibious operations.
- Conduct ISR functions to meet the GCE commander's intent.

- Provide input to the MAGTF ISR plan.
- Establish reporting requirements and intelligence and reconnaissance coordination procedures when existing procedures are inadequate.

SUPPORTED UNIT'S COMBAT OPERATIONS CENTER

The COC is the command's "nerve center" where information is fused to provide situational awareness for the commander and staff. The division COC, as well as regimental and battalion COCs in the GCE, functions in much the same fashion as the MEF COC.

Current operations are directed from the COC by the G-2/S-2 and G-3/S-3 watch officers and NCOs. The watch officers monitor current operations by using the common tactical picture (commonly referred to as CTP) and coordinate activities for the commander. The activities of the G-2 and G-3 watch officers and NCOs are based on situational awareness gained from the common tactical picture and on input, focusing on the CCIRs, from staff sections and other information sources.

The COC is supported by automated tactical information systems and data communications. These systems support the information processing and exchange requirements of the COC and enable it to monitor and direct current operations. Strict procedures are used to manage information flow to preclude overloading the system. These procedures must focus on timely satisfaction of the CCIRs and maintaining the common tactical picture.

G-3/S-3 Section Responsibilities

The G-3/S-3 section supervise the activities of the current operations, future operations, and future plans sections (see fig. 3-5 on page 3-14) as follows:

- Plans, coordinates, and supervises the tactical movement and employment of units.
- Plans, coordinates, directs, and monitors fires.
- Integrates fire and maneuver with other warfighting functions.
- Monitors the battle.
- Operates the COC and determines the general location of the command post (CP).
- Designates the general location for bivouacking, quartering, and staging units involved in tactical operations.
- Recommends IRs to the G-2/S-2.
- Recommends missions for reconnaissance units in coordination with the G-2/S-2.
- Integrates and displays the COP.
- Determines priorities for allocation of personnel, weapons, equipment, and ammunition.
- Estimates personnel and combat service support requirements in coordination with the G-1/S-1 and G-4/S-4.
- Develops task organization (assign missions to subordinate elements).

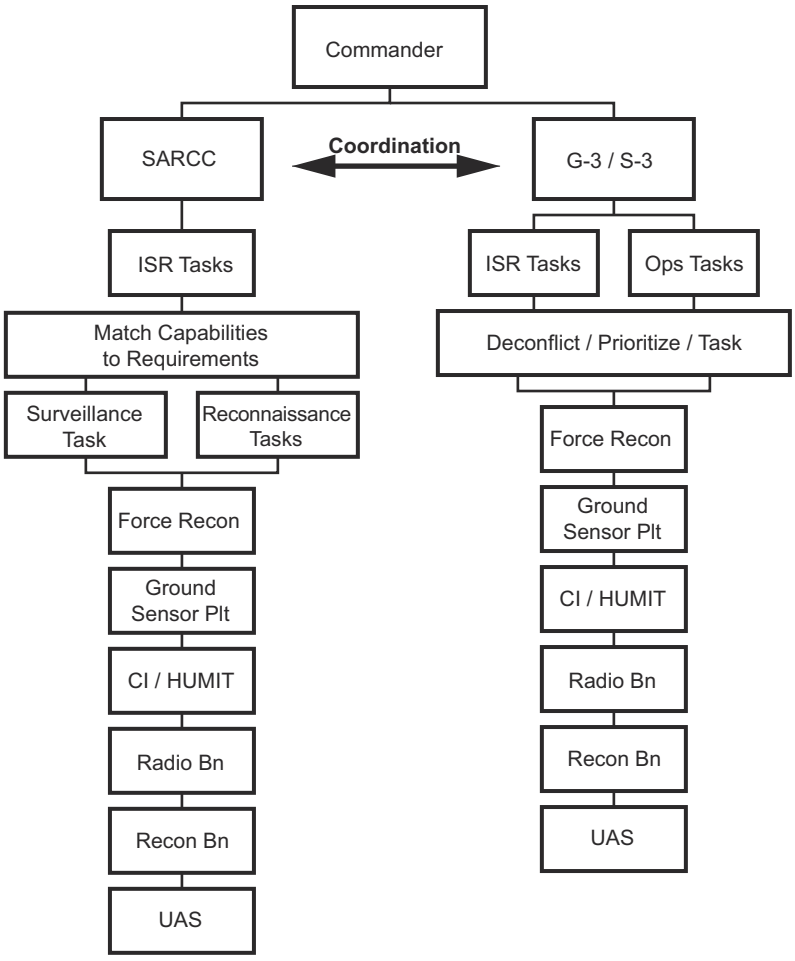


Figure 3-5. Mission Tasking.

- Exercises overall staff responsibility for the preparation of operation plans (OPLANs) and OPORDs.
- Exercises staff cognizance for Annexes A (Task Organization), C (Operations), J (Command Relationships), and W (Aviation Operations).
- Develops, authenticates, publishes, and distributes OPLANs, OPORDs, fragmentary orders (FRAGOs), and warning orders (WARNORDs).
- Reviews subordinate units' OPLANs and OPORDs.
- Conducts long-range contingency planning.

Combat Operations Center Responsibilities

The COC coordinates, monitors, and maintains the status of all ongoing organic and supporting ground reconnaissance collection and shaping operations. This includes—

- Missions, tasked intelligence collection requirements, and reporting criteria for all collection missions.

- Locations and times for all pertinent fire support control measures.
- Primary and alternate communications and information systems (CIS) plans for routine and time-sensitive requirements.

The COC responsibilities support employed ground reconnaissance collectors, the SARCC, key command element nodes, and MSC C2 nodes supporting ongoing command and control of ground reconnaissance collection operations and rapid dissemination of acquired data/intelligence to those who need it (e.g., the fires support cell and the ROC). The COC's support responsibilities include, but are not limited to, the following:

- Conducting and coordinating detailed ground reconnaissance collection planning and coordination with the MSC's and ground reconnaissance organizations planners, with emphasis on ensuring understanding of the collection plan and specified intelligence reporting criteria.
- Ensuring other MAGTF C2 nodes are appraised of ongoing ground reconnaissance and other intelligence and reconnaissance operations (e.g., the fires support cell).
- Receiving routine and time-sensitive ground reconnaissance related reports from deployed reconnaissance elements. Cross-cue this information among intelligence and reconnaissance collectors as appropriate.
- Disseminating reconnaissance reports rapidly to MAGTF C2 nodes, intelligence elements, and others in accordance with standing PIRs/IRs, intelligence reporting criteria and dissemination plan, and the current tactical situation.
- Maintaining the status of the communications information systems.
- Overseeing and coordinating unit/team movement requirements and unit/team resupply.

RECONNAISSANCE OPERATIONS CENTER

The ROC is the principal C2, operations, and information center for ground reconnaissance units. The ROC is established whenever ground reconnaissance forces are employed. The ROC normally operates as a standalone operations center and reports directly to its HHQ via doctrinal networks.

The ROC is the largest cell of the CP and the principal planning organization for the unit. The ROC contains future, current, and close operations cells. The ROC functions include—

- Ensuring that combat service support operations remain integrated.
- Providing information and assistance to the commander and his subordinate commanders.
- Anticipating future combat support and combat service support requirements and pushing assets forward before needs are reported.
- Collating information for the commander.
- Acquiring and coordinating combat support assets.
- Providing reports to HHQ.
- Providing intelligence to subordinate units.

- Planning for future operations.
- Providing terrain management.
- Maintaining communications.
- Monitoring combat service support status.
- Providing target value analysis.
- Coordinating with the SARCC, higher, adjacent, supporting, and subordinate units.

Responsibilities

The ROC is organized into three functional areas: operations, intelligence, and communications. Each area is headed by the appropriate staff officer or, in some cases, staff noncommissioned officer (SNCO). These individuals are directly responsible to the commanding officer for their individual functions.

The operations officer is normally delegated the authority to coordinate the functioning of the ROC and to act on the behalf of the commanding officer in his absence. The functions of the operations section within the ROC are as follows:

- Integrate planning with broader MAGTF intelligence and reconnaissance operations.
- Develop the ground reconnaissance unit's estimate of supportability and subsequent ground reconnaissance plan.
- Recommend the employment of ground reconnaissance platoons/teams to support the general scheme of maneuver and concept of operations.
- Exercise command and control of all platoon/team insertions and extractions.
- Monitor and support all ongoing ground reconnaissance operations.
- Committed ground reconnaissance platoons/teams report directly to the ROC who then forwards all pertinent information to the supported unit's COC. The supported unit's COC then relays all communications to the G-2/S-2 via the ground reconnaissance LNO.
- Ensure that all committed platoons/teams are debriefed immediately upon return.
- Maintain planning and operational aids to include—
  - Operations situation map (COP portraying the friendly situation).
  - Intelligence situation map (COP portraying the enemy situation and the positions of intelligence gathering assets to include designated US Army, joint, and combined ground reconnaissance elements).
  - Overlays depicting obstacles.
  - Current event map depicting named areas of interest (NAIs), time phase lines for threat movements, and current estimated threat COAs.
  - Reconnaissance team status board.
  - Brevity words/prowords matrix board.
  - Astronomical/weather/challenge and password board.
  - Significant events board.
  - Reconnaissance and surveillance events matrix.

Personnel

The executive officer (XO) exercises ADCON of the ROC. The ROC is composed of the S-2 and the S-3 sections, the S-1 and S-4 as appropriate, elements of the communications section, and the fire support element. It can also include other representatives, depending on the mission of the unit.

The nucleus of the ROC is the three functional areas of the S-2, the S-3, and the fire support element. Other elements are arranged around this nucleus. Standardizing ROC configurations facilitates rapid displacement, establishment, and efficient operations. Internal arrangements must facilitate staff coordination, provide adequate work space and communications assets, and reduce the number of personnel physically present inside the ROC.

Personnel in the ROC monitor operations on a 24-hour basis. They maintain communications with organic, higher, and adjacent units to stay abreast of the situation, post maps, maintain records, and send reports as required.

The ROC personnel maintain close coordination with the SARCC and the supported unit's COC from which they receive mission orders and coordinate operational planning in order to—

- Monitor communications of all employed ground reconnaissance platoons/teams.
- Receive status and intelligence reports; evaluate them against current IR tasks and intelligence reporting criteria.
- Record and graphically display current ground reconnaissance unit locations and threat situations.
- Make routine and time-sensitive reports to the G-2/S-2 section, P&A cell, or other designated recipients in accordance with the intelligence dissemination plan through the supported unit's COC.
- Evaluate and assess the relevance of information to the ongoing operations.

Operations

Personnel are available to provide effective and continuous operation of the ROC. Establishing shifts provides ample personnel with the required expertise to operate the ROC and make decisions on major issues.

The standard shift evenly divides available personnel based on staff function and expertise. Adequate shift change procedures reduce continuity problems and provide standardized teams, enhanced teamwork, and simplicity. Disadvantages to operating in shifts include a break in continuity of operations during shift change and possible absence of a key staff officer when needed.

The XO uses replacement officers and NCOs as augmentation. Using replacement leaders on the staff initially integrates them into the unit with minimum disruption. They may replace current staff officers who assume leadership roles in subordinate units. Any manning method used must retain flexibility to accommodate personnel departing from the ROC for specific duties and to adapt to changing situations and available personnel. Needlessly disrupting the rest of the personnel rapidly degrades their effectiveness.

COMMAND AND SUPPORT RELATIONSHIPS AND RESPONSIBILITIES

Command and control of ground reconnaissance units requires close coordination among the commander, staff sections, and ground reconnaissance unit commanders to ensure that reconnaissance effectively supports operations.

The force commander must provide clear planning guidance to his staff and ground reconnaissance units. The staff must be able to translate the commander's guidance into reconnaissance and surveillance plans, including intelligence collection requirements. Reconnaissance unit commanders must then execute the tasks and missions assigned in those plans.

Key Sections

Key sections required to command and support ground reconnaissance units include administration, intelligence, operations, logistics, and communications.

Administration. The G-1/S-1 are responsible for all personnel requirements with regard to the ground reconnaissance effort. Ground reconnaissance requirements for MAGTF/GCE may require personnel augmentation to satisfy all requirements. All requests for ground reconnaissance personnel augmentation will be developed by the G-2/S-2 and provided to the G-1/S-1 for either internal sourcing or for forwarding to HHQ for action (e.g., global sourcing).

Intelligence. The G-2/S-2 are responsible for enabling the effective use of intelligence throughout the command. As the principal disseminators of intelligence, they are responsible for ensuring that the full implications of the intelligence picture are understood. The G-2/S-2 are required to be full and continuous participants in the planning process and are responsible for ensuring that the mission folder contains all relevant inputs from the intelligence section.

The G-2/S-2 section validates the IRs, develops reconnaissance and surveillance tasks, and matches unit capabilities to the requirements. The G-2/S-2 section then makes recommendations to the operations section on tasking ground reconnaissance units, which ultimately deconflicts operations and tasks the subordinate elements with their mission.

Operations. The G-3/S-3 are responsible for planning, coordinating, and supervising the tactical employment of units. As such, the movement and operations of ground reconnaissance units and supporting units must be coordinated with the G-3/S-3 for integration in future and current operations planning.

Since ground reconnaissance units also provide certain non-intelligence capabilities (i.e., battlespace shaping and specialized limited scale raids), close coordination of reconnaissance and surveillance tasks by the G-2/S-2 and G-3/S-3 is necessary for mission prioritization and deconfliction.

The G-3/S-3 have primary responsibility for the planning and operations of maneuver and fires. The G-3/S-3 are, therefore, a principal staff user of ground reconnaissance collection and require close coordination throughout the planning process to ensure effective reconnaissance support.

The G-3/S-3 personnel must understand the capabilities of the different reconnaissance units. The advantages and limitations of different types of reconnaissance tasks and support provided to form realistic expectations of reconnaissance operations. This is essential in effectively and efficiently requesting appropriate support and effectively integrating intelligence and reconnaissance into overall unit operations. Key tasks include the following:

- Planning, coordinating, and supervising the tactical employment of reconnaissance units conducting missions.
- Integrating fire support with the operations of reconnaissance units.
- Developing counterreconnaissance, deception, and force protection plans to protect reconnaissance units.
- Recommending priorities for allocation of personnel, weapons, equipment, and ammunition to all forces including reconnaissance units.

Logistics. The G-4/S-4 are responsible for the logistical support of organic or attached ground reconnaissance units. They ensure that the required support is available by developing arrangements early in the deployment to meet the particular needs of the deployed ground reconnaissance unit. Special attention must be given to the logistics requirements of ground reconnaissance units' unique equipment (e.g., combatant dive equipment and parachute resources).

Plans. The G-5 is responsible for all long-range (future) planning and joint planning matters. Normally, the G-5 is only found at the MEF and Marine Corps forces levels. At echelons below the MEF level, future planning is the responsibility of the G-3/S-3. The G-5's understanding of ground reconnaissance units and the type of support that those units require must parallel that of the G-3/S-3.

Communications Systems. The G-6/S-6 are responsible for providing and protecting CIS connectivity and operations within and external to the MAGTF/GCE. The G-6/S-6 provide the communications paths, access to networks, and frequencies for ground reconnaissance units organic, attached to, and/or supporting the command. This requires significant systems knowledge across ground reconnaissance and all-source intelligence CIS.

Key Personnel

Key personnel required to command and control ground reconnaissance units include the commander, intelligence personnel, operations personnel, and ground reconnaissance leaders.

Commander. Intelligence is an inherent and essential responsibility of command. Command attention of the intelligence effort is critical to military success. The commander must ensure that all members of the unit understand the importance placed on intelligence and the requirement to support the intelligence effort: intelligence, CI, and reconnaissance.

The commander's involvement in the intelligence process encompasses focusing the intelligence effort, participating in the intelligence process, using intelligence in decisionmaking, supporting the intelligence effort, and providing personal evaluation of the intelligence effort.

The commander focuses intelligence and supporting reconnaissance efforts by clearly communicating the intent and planning guidance as well as identifying PIRs. The PIRs drive all resulting intelligence collection, production, and dissemination activities and supporting reconnaissance operations. In short, the PIRs are the commander's guidance for unit intelligence operations.

A detailed and well-thought-out concept of intelligence support, developed in accordance with the commander's intent and concept of operations, will provide appropriate allocation of intelligence and reconnaissance capabilities between the MAGTF/GCE main and supporting efforts, and between intelligence and reconnaissance support to current operations and continuous support to future operations.

Ground reconnaissance resources are limited. All ground reconnaissance units have multi-mission roles and can be tasked with offensive operations, fire support, and other missions in addition to ground reconnaissance missions in support of intelligence operations. Therefore, the commander's role in mission prioritization of organic ground reconnaissance resources is particularly important.

Assistant Chief of Staff, Intelligence. The AC/S G-2 develops and answers outstanding PIRs and IRs by planning, directing, integrating, and supervising organic ground reconnaissance and multi-discipline MEF and supporting intelligence operations. Key responsibilities of the AC/S G-2 include—

- Preparing appropriate ground reconnaissance and other intelligence plans and orders. Reviewing and coordinating the ground reconnaissance and all-source intelligence plans of JTFs, theaters, and other organizations.
- Submitting and coordinating all-source and ground reconnaissance collection, production, and dissemination requirements beyond the capability of the command to HHQ for JTF or other Services ground reconnaissance support.
- Ensuring ground reconnaissance and other intelligence information is rapidly processed, analyzed, and incorporated where appropriate in all-source intelligence products, and rapidly disseminated to all MEF and external units requiring these.
- Evaluating other Services, JTF, and other ground reconnaissance and all-source intelligence support and adjust stated IRs, if necessary.
- Identifying and correcting deficiencies in ground reconnaissance and other intelligence and reconnaissance personnel and equipment resources.
- Incorporating realistic ground reconnaissance operations in training exercises to improve individual, collective, and unit readiness.
- Facilitating understanding of the employment, capabilities, limitations, and use of ground reconnaissance and other intelligence in support of the planning and execution of operations.

G-2 Operations Officer. The G-2 operations officer coordinates and provides intelligence and reconnaissance support (to include key ground reconnaissance support) to the commanding general, the G-3 operations section, and the rest of the command element's battle staff. Key responsibilities of the G-2 operations officer include—

- Serving as the G-2 representative to the MEF/division command element crisis action team.
- Coordinating, providing, and supervising intelligence support to the command element's current operations center, future operations center, and FFC.
- Planning, directing, and supervising the red cell and the green cell.
- Providing recommendations on PIR and IR validation, prioritization, and tasking to the AC/S G-2 and the ISC.
- Coordinating and supervising the transition of intelligence planning and operations from G-2 plans to G-2 future operations, and from G-2 future operations to G-2 current operations, in order to effectively support the MEF's "single battle" transition process.
- Planning, directing, and supervising liaison teams to external commands (e.g., the JTF and joint functional components headquarters) and intelligence organizations.
- Coordinating with the ISC and MSC G-2 operations officers to ensure unity of effort of MEF intelligence and reconnaissance operations.
- Providing intelligence input and other support to WARNORDs and FRAGOs and to operations related reporting (e.g., periodic situation reports).
- Coordinating intelligence training for the G-2 section and providing G-2 oversight for and integration of the entire MEF intelligence and reconnaissance training program.
- Providing other intelligence support and tasks as directed by the AC/S G-2.

G-2 Plans Officer. The G-2 plans officer plans the concept of intelligence and reconnaissance operations for approval by the AC/S G-2 and subsequent implementation by the ISC based upon the mission, threat, commander's intent, guidance, and concept of operations. This concept of intelligence and reconnaissance operations will usually include a supporting ground reconnaissance concept of operations. Key responsibilities of the G-2 plans officer include—

- Leading, coordinating, and providing intelligence and reconnaissance support to the G-5 future plans section.
- Planning and coordinating intelligence and reconnaissance support requirements for and the deployment of intelligence and reconnaissance elements and resources in the AO.
- Providing recommendations on PIR and IR validation, prioritization, and tasking to the AC/S G-2 and the ISC.
- Coordinating, in conjunction with the ISC, G-2 development of Annex B (Intelligence) and Annex M (Geospatial Information and Services) to MEF OPLAN, their supporting appendices (such as the initial Appendix 14, Reconnaissance and Surveillance Plan), and all intelligence and reconnaissance inputs to other annexes of OPLANs and OPORDs.
- Apprising the G-2 section, other command element staff sections, intelligence liaison personnel, augmented personnel, and others, as appropriate, of the intelligence and reconnaissance planning actions and requirements.

- Identifying requirements and provide recommendations to the G-2 operations officer for MEF intelligence liaison teams to external commands (e.g., the JTF or other components' headquarters) and intelligence organizations.
- Coordinating and developing policies for intelligence, CI, and reconnaissance operations.
- Planning, directing, and supervising the G-2's imagery and mapping, CI/HUMINT, SIGINT, and weather sections.
- Conducting other intelligence and reconnaissance support and tasks as directed by the AC/S G-2.

Intelligence Support Coordinator. During operations, the intelligence battalion commander fills the additional duty of ISC and serves under the staff cognizance of the MEF AC/S G-2. The intelligence battalion's S-3 section along with the operations center element of the MEF G-2 form the core of the intelligence support coordinator's support effort, with planning, direction, and C2 conducted within the IOC's support cell. The ISC is responsible to the MEF AC/S G-2 for the overall planning and execution of MEF all-source intelligence, CI, and reconnaissance operations. Key ISC responsibilities include—

- Implementing the concept of intelligence and reconnaissance operations (and the supporting ground reconnaissance concept of operations) developed by the G-2 plans officer and approved by the AC/S G-2.
- Establishing and supervising operation of the IOC, which includes the support cell, the SARCC, and the P&A cell. Generally, the IOC will be colocated with the command element's main CP (see fig. 3-2 on page 3-7).
- Developing, consolidating, validating, and prioritizing recommended PIRs and IRs to support MAGTF planning and operations.
- Planning, developing, integrating, and coordinating intelligence and reconnaissance collection, production, and dissemination plans, to include the effective organic and external integration and employment of MAGTF ground reconnaissance elements. This includes ISC staff cognizance of SIGINT, IMINT, CI, HUMINT, geographic intelligence, ground remote sensors, ground reconnaissance, and tactical air reconnaissance intelligence collections, production, and dissemination operations.
- Developing, in conjunction with the G-2 plans officer and G-2 operations officer, complete Annex B (Intelligence) and Annex M (Geospatial Information and Services) to the MEF OPORD, their supporting appendices (such as appendix 14, Reconnaissance and Surveillance Plan), and all intelligence and reconnaissance inputs to other annexes of OPORDs.
- Planning, developing, integrating, and coordinating intelligence, CI, and reconnaissance support to the six intelligence functions: commander's estimate, situation development, I&W, force protection, targeting, and combat assessment.
- Managing and fusing the threat (or red) COP inputs from subordinate units and external commands and intelligence and reconnaissance agencies into the command element's threat COP.
- Providing intelligence and reconnaissance support to the command element's G-2 section and the MSCs.
- Preparing the intelligence and CI estimates to support G-2 plans.

- Preparing friendly intelligence, CI, and reconnaissance estimates of supportability for planning and operations.
- Planning, developing, and coordinating intelligence CIS architecture(s), to include its integration with and support of ground reconnaissance and other intelligence and reconnaissance requirements.
- Coordinating and integrating ground reconnaissance and all-source intelligence operations with other Service components, JTF intelligence support element, theater joint intelligence center, joint analysis center, and national intelligence agencies and operations, to include all aspects of intelligence reachback support.
- Assisting with the evaluation and improvement of ground reconnaissance and all-source intelligence operations as well as other intelligence and reconnaissance support and tasks as directed by the AC/S G-2.

Surveillance and Reconnaissance Coordination Center, Officer in Charge. The SARCC OIC is an immediate subordinate of the ISC, who is responsible for supervising the execution of the integrated organic, attached, and direct support intelligence collection and reconnaissance operations. Key responsibilities of the SARCC OIC include—

- Coordinating, monitoring, and maintaining the status of all ongoing organic and supporting reconnaissance collection operations. This includes—
  - Missions.
  - Tasked intelligence collection requirements.
  - Reporting criteria for all collection missions.
  - Locations and times for all pertinent fire support control measures.
  - Primary and alternate CIS plans for both routine and time-sensitive requirements for employed ground reconnaissance collectors, the SARCC, key command element nodes.
  - MSC C2 nodes supporting ongoing command and control of ground reconnaissance collection operations and rapid dissemination of acquired data/intelligence to those who need it (e.g., the COC, FFC, and ROC).
- Conducting and coordinating detailed ground reconnaissance collection planning and coordination with the MSC and ground reconnaissance organizational planners, with emphasis on ensuring understanding of the collection plan and specified intelligence reporting criteria.
- Ensuring other MAGTF C2 nodes are appraised of ongoing ground reconnaissance and other intelligence and reconnaissance operations (e.g., the COC, FFC).
- Receiving routine and time-sensitive ground reconnaissance related reports from the ROC. Cross-cue this information among intelligence and reconnaissance collectors as appropriate.
- Disseminating reconnaissance reports directly to MAGTF C2 nodes, intelligence elements, and others in accordance with standing PIRs/IRs, intelligence reporting criteria and dissemination plan, and the current tactical situation.

Production and Analysis Cell, Officer in Charge. The P&A cell OIC is the third principal subordinate to the ISC, with primary responsibility for managing and supervising the all-source intelligence processing and production efforts (see fig. 3-2 on page 3-7), to include staff

cognizance of all aspects of ground reconnaissance related intelligence production. Key responsibilities of the P&A cell OIC include—

- Planning, directing, and managing operations of the all-source fusion platoon (to include the fusion, order of battle, intelligence preparation of the battlespace (IPB), and target intelligence/ BDA teams), the topographic platoon, the IMINT platoon, the direct support teams, and other analysis and production elements as directed.
- Coordinating and integrating P&A cell operations, estimates, and products with the G-2 operations branch and its red cell/green cell operations and estimates.
- Maintaining all-source automated intelligence databases, files, workbooks, country studies, and other intelligence studies (e.g., SERE, evasion and evacuation [E&E] intelligence studies).
- Planning and maintaining imagery, mapping, and topographic resources and other intelligence references.
- Administering, integrating, operating, and maintaining intelligence processing and production systems, both unclassified general service and sensitive compartmented information systems (e.g., joint deployable intelligence support system and intelligence analysis system).
- Analyzing and fusing ground reconnaissance obtained information with other intelligence into tailored all-source intelligence products to satisfy all supported commanders' stated or anticipated PIRs and IRs.
- Developing and maintaining current and future intelligence situational, threat, and environmental assessments and target intelligence based upon all-source analysis, interpretation, and integration.
- Managing and fusing the threat (or red cell) and green cell COP inputs from subordinate units and external commands and intelligence agencies into the command element's threat COP.

Collection Management/Dissemination Officer. The CM/DO works within the support cell (see fig. 3-2 on page 3-7) and in coordination with the P&A cell OIC, the SARCC OIC, the G-2 operations officer, the ground reconnaissance unit commanding officers/OICs, and the G-6. Key responsibilities of the CM/DO include—

- Determining and coordinating the collection effort of PIRs/IRs that may be collected via ground reconnaissance and supporting resources.
- Determining PIRs/IRs and preparing requests for intelligence (RFIs) beyond organic capabilities and preparing submissions to HHQ and external agencies for support.
- Recommending dissemination priorities, developing intelligence reporting criteria to drive collection operations, and advising and selecting a means of dissemination.
- Developing and coordinating ground reconnaissance and all-source intelligence collection plans and coordinating and integrating these with the MEF, other components, JTF, theater, and national intelligence and reconnaissance operations.
- Developing and coordinating ground reconnaissance and all-source intelligence dissemination plans and supporting CIS architectures for voice and data networked communications as well as coordinating and integrating these with MEF, other components, JTF, theater, and national intelligence and reconnaissance C2, CIS, and dissemination operations.

- Monitoring the flow of ground reconnaissance obtained information throughout the MAGTF and ensuring that it is delivered to the intended recipients in a timely fashion and satisfactorily meets their intelligence needs.
- Evaluating the effectiveness of MEF and supporting ground reconnaissance collection and dissemination plans.

Future Operations Officer. The future operations officer conducts detailed planning for the command's next mission, focuses on new FRAGOs and/or changes to the mission for subordinate elements, and forms and leads the integrated planning effort. Key responsibilities include—

- Developing branch plans and refining sequels.
- Coordinating with the G-5 for US Government, combatant commander, and Service support.
- Developing potential CCIRs and PIRs.
- Planning to maintain the initiative and avoiding unnecessary operational pauses.
- Interacting with force fires coordinator and the MAGTF target board to shape the battlespace for the next MSC mission change.
- Drafting initial OPORD or FRAGO.
- Transitioning the plan to current operations for execution. The key to successful transition is to maximize time for MSCs to react to the FRAGO.
- Developing briefing slides and decision aids as required.
- Providing direction and oversight to operational planning teams.

Current Operations Officer. The current operations officer coordinates the current battle and ensures adherence to the commander's intent. Key responsibilities include—

- Operating the COC.
- Providing the nucleus of the "remain behind" element during force deployment.
- Confirming the plan to the commander.
- Executing plans.
- Monitoring close battle.
- Analyzing battlespace events and information.
- Interpreting and assessing battlespace events.
- Assessing CCIR collection.
- Coordinating with the force fires coordination center and future operations to adjust the current plan.
- Establishing and operating the operations synchronization center.
- Coordinating and monitoring execution of force deployments.
- Transmitting orders and tactical decisions.
- Executing the OPORD.
- Developing FRAGOs from future operations input for the current OPORD to execute the current battle.
- Establishing information requirements/criteria for rapid decisionmaking.

Ground Reconnaissance Commanders and Detachment Leaders. Ground reconnaissance commanders and detachment leaders are responsible for planning for and providing the MAGTF/ GCE with ground reconnaissance to support intelligence and battlespace shaping. Ground reconnaissance units and their subordinates are directly tasked by the operations section of their HHQ. Along with staff, the ground reconnaissance unit commander works under the staff cognizance of the G-3/S-3, and in close coordination with the G-2/S-2 and the ISC. Key responsibilities of the ground reconnaissance commanders and detachment leaders include—

- Recommending the most effective employment of ground reconnaissance units, to include advice on the employment of ground reconnaissance units in different expeditionary environments (riverine, desert, jungle, mountain, and urbanized terrain).
- Assisting the G-2/S-2 and the ISC in preparation of a reconnaissance and surveillance plan.
- Assisting with the development of ground reconnaissance estimates of supportability.
- Recommending the best employment of ground reconnaissance visual, acoustic, and imagery collection capabilities.
- Recommending the number and size of ground reconnaissance patrols and general AOs.
- Recommending timeframes for the introduction and recovery of ground reconnaissance units before and subsequent to commencement of operations as well as insertion and extraction methods.
- Recommending and coordinating the CIS support requirements for ground reconnaissance elements (e.g., frequencies, cryptographic support, retransmission requirements, etc.).
- Recommending combat service support requirements.
- Recommending the employment of other types of reconnaissance assets that would be better suited for a particular mission (i.e., air assets or ground sensors).
- Assisting the G-2/S-2, ISC, and G-3/S-3 with the preparation of all information and support requests to HHQ during preliminary planning for reconnaissance prior to D-Day. Coordinating all aspects of ground reconnaissance employment with HHQ, other components, and/or adjacent headquarters throughout operations.
- Recommending to the ISC the most effective C2 integration of unit intelligence and reconnaissance operations.
- Providing the ISC and other intelligence staff leaders with necessary representatives to the SARCC, other C2 nodes, and intelligence operations nodes.
- Establishing, operating, and maintaining the unit's ROC.
- Providing ground reconnaissance derived reports, products (e.g., sketches), and ground perspective imagery to the intelligence battalion, IOC, MEF command element, and other commanders.
- Developing ground reconnaissance execution checklists and operational timelines.
- Ensuring the development of coordinating instructions, maneuver and fires control measures, and other mission essential information and support.

Ground Reconnaissance Platoon Commanders and Team Leaders. Ground reconnaissance platoon commanders and TLs are the actual ground reconnaissance operations mission executors. The platoon commander/TL must—

- Issue warning order to the platoon/team based on initial intelligence and operations guidance received.
- Ensure the proper training for each platoon/team member.
- Ensure that each platoon/team member has the proper equipment for the prescribed mission.
- Ensure that the final C2 and supporting CIS support and equipment is provided and operational for assigned missions.
- Ensure that the final logistical support is provided for assigned missions.
- Provide the final input to ground reconnaissance plans, orders, and support measures. This includes insertion/extraction methods and maneuver and fires support measures for the platoon's/team's mission.
- Coordinate with insertion, extraction, and recovery planners and agencies (particularly the SARCC).
- Coordinate fire support.
- Issue mission orders to the platoon/team.
- Conduct all intelligence/reconnaissance missions.
- Execute all orders issued from the commander.
- Ensure timely debriefing of the platoon/team following recovery.
- Provide Level I intelligence reporting during the operation.
- Provide Level II intelligence reporting to the designated recipients once the mission is completed.
- Prepare the platoon/team for the next reconnaissance mission, including replacement of personnel and equipment, resupply of consumables, and ensure proper rest, medical care, and sanitation for the platoon/team.
- Ensure reconstitution of the platoon/team to full operational status and readiness to perform subsequent missions.

COMMAND AND CONTROL OF GROUND RECONNAISSANCE UNITS

To be successful, the ground reconnaissance commander must see the battlefield and respond quickly; this can be achieved through an effective and responsive C2 system.

In order to see the battlefield, the commander should be positioned to best influence the battle and maintain as much situational awareness as possible while still being able to exercise command and control. However, the relatively large size, dispersion, and mobility of ground reconnaissance units can pose C2 challenges for the commander. Ground reconnaissance units are often required to begin their missions and to operate very soon after the receipt of an OPORD. A responsive C2 system allows the commander to be positioned wherever the situation calls

for personal presence without being deprived of the ability to respond to opportunities or changing situations. A C2 system permitting such flexibility and freedom to operate independently emphasizes certain specific operational techniques and command practices that include the following:

- The optimization of time by routine use of WARNORDs, situation updates, and parallel/ anticipatory planning.
- The emphasis is on standardized training in operations and staff practices to ensure mutual understanding between leaders and units.
- Standard language, symbols, and standing operating procedures (SOPs) are used to ease execution of orders.
- Ground reconnaissance operations occur across wide areas, and commanders normally operate with significant freedom of action.
- The reconnaissance commander cannot expect constant or close supervision by his higher commander.
- Close command discretion is seldom possible, even when desired.
- Each commander, in turn, must provide his subordinates freedom of action for the same reason.
- Unity of effort is ensured by the intent of the commander assigning the mission. Each subordinate commander must understand the intent of the commander two levels above him and the concept of immediate commander.
- The reconnaissance commander exercises initiative within the latitude permitted to achieve the intent as battlefield conditions develop.

An effective battle C2 system accomplishes its mission through four interrelated components:

- Command echelons.
- C2 organization and facilities.
- Command and staff relationships and responsibilities.
- C2 reporting and communications.

FIRE SUPPORT COORDINATION CENTER

Organization

The FSCCs from the reconnaissance battalion and the FORECON companies are organized similarly to that of an infantry battalion.

The FSCC normally consists of an air officer, a fire support liaison chief, and the S-3. While the FSCC is built around this nucleus, the fire support coordination cell is augmented with the personnel and equipment that are needed to conduct fire support coordination functions. Augmentation sources may include Marine Corps and external sources.

Staff Roles and Responsibilities

During an operation, FSCC staff members are required to plan fires, conduct targeting, and integrate fires simultaneously with maneuver elements. The FSCC's coordinating responsibilities include the requirement to disseminate timely fire support information; to institute coordination measures, as required; and to integrate fire support activities that affect two or more fire support agencies, subordinate elements, or adjacent units.

Key personnel in the FSCC include the fire support liaison chief, air officer, artillery LNO (if augmented with one), naval gunfire liaison officer (if augmented with one), and target information officer.

Fire Support Liaison Chief. The reconnaissance battalion and FORECON company are structured by TO for an MOS 0861, fire support man at the rank of gunnery sergeant. The fire support liaison chief's responsibilities include—

- Supervising the operation of the FSCC, including organizing and training personnel.
- Advising the commander on all fire support matters.
- Developing the fire support plan based on the scheme of maneuver, the intelligence estimate, requests from subordinate units, and the available fire support.
- Coordinating all fire support within the reconnaissance AO.
- Processing of target information, including the shelling report.
- Ensuring the safety of friendly troops from our own fire support.

Air Officer. The reconnaissance battalion and FORECON company are structured by TO for an MOS 7502, forward air controller/air officer at the rank of captain. The air officer's responsibilities include—

- Advising the commander/fire support liaison chief on all air support matters.
- Developing the air fire plan based on the scheme of maneuver, the intelligence estimate, assets available, and coordination with the fire support liaison chief.
- Submitting air request.
- Coordinating actions of forward air controllers (FACs), JTAC, and JFO.

Fire Support Officer. The fire support officer is normally a lieutenant provided by a direct support artillery battalion. The fire support officer's responsibilities include—

- Advising the commander/fire support liaison chief on all artillery matters.
- Developing the artillery fire plan based on the scheme of maneuver, the intelligence estimate, assets available, and coordination with the fire support liaison chief.
- Passing requirements for support to the appropriate artillery fire direction center for action.
- Coordinating artillery unit requirements with the commander/fire support liaison chief.
- Coordinating the actions of the FACs, JTACs, and JFOs.

Naval Gunfire Liaison Officer. The naval gunfire liaison officer is normally a Navy lieutenant provided by a direct support artillery battalion. The naval gunfire liaison officer's responsibilities include—

- Advising the commander/fire support liaison chief on all naval surface fire support (NSFS) matters.
- Developing the NSFS plan based on the scheme of maneuver, the intelligence estimate, assets available, and coordination with the fire support liaison chief.
- Assisting in calling for NSFS.
- Coordinating the actions of the FACs, JTACs, and JFOs.
- Passing requirements for support to the appropriate NSFS ship.

Targeting Information Officer. The reconnaissance battalion and FORECON company are structured by TO for an MOS 0202 (NMOS 0307), intelligence officer at the rank of captain. The intelligence officer normally fills the role of targeting information officer. His responsibilities concerning target intelligence include—

- Disseminating target information and intelligence to the FSCC.
- Advising the commander/fire support liaison chief on enemy weapons capabilities.
- Keeping appropriate records of targets.

COMMAND AND STAFF

Key personnel that exercise command or compose the staff include the unit commander, XO, staff officers and enlisted Marines, subordinate unit commanders, and liaison personnel.

Ground Reconnaissance Unit Commander

The unit commander analyzes and restates the mission, designs the concept of operation, organizes the forces, provides support to subordinate units, and issues mission orders with sufficient details for his subordinates to plan and lead their units.

The commander relies on his staff and subordinate commanders for advice and assistance in planning and supervising operations; therefore, he must understand their capabilities and limitations. The commander must train them to achieve his intent during his absence, overcome the failure of communications systems, and/or changes in the situation.

Ground Reconnaissance Unit Executive Officer

Second in command and the principal assistant to the commander, the XO performs a variety of functions and is responsible for assignment of tasks and the efficient, coordinated, and prompt response of the staff. The XO directs, supervises, and ensures coordination of staff work except in those specific areas reserved by the commander, thereby freeing the commander from routine details.

During combat operations, the XO is positioned in and responsible for the ROC and its operation. The XO directs and coordinates combat support in consonance with the commander's plan and ensures continuous combat service support. The XO, assisted by the operations chief, watch officer, and watch chief, maintains routine reporting, coordinates activities of liaison personnel, and is always planning ahead, remaining current on the tactical situation and prepared to assume command on a moment's notice.

Ground Reconnaissance Unit Staff

The unit staff consists of those officers and enlisted Marines who assist the commander in planning and supervising tactical operations. The staff synchronizes combat support and combat service support operations to ensure total integration of support with the commander's concept. The staff assists subordinate commanders by anticipating problems, providing informal staff responses when appropriate, and providing assistance in functional areas.

Ground Reconnaissance Unit Subordinate Commanders

Assigned company commanders and platoon commanders answer to the ground reconnaissance unit commander for the discipline, combat readiness, and training of the unit as well as the maintenance of its equipment. The subordinate commanders must be proficient in the tactical employment of their units and combat support elements, and they must know the capabilities and limitations of their personnel and equipment.

Subordinate commanders provide current combat information to the ground reconnaissance unit commander or HHQ and must remain flexible to execute missions that meet changing situations on the battlefield.

Ground Reconnaissance Unit Liaison Officers

Liaison is "that contact or intercommunication maintained between elements of military forces or other agencies to ensure mutual understanding and unity of purpose and action." (JP 1-02) When directed or required, ground reconnaissance units will dispatch an LNO to the MAGTF or MEF COC/SARCC and receive LNOs from other organizations to facilitate intercommunication and unity of purpose between reconnaissance units and higher echelons of command. (For more information, refer to JP 3-08, *Interorganizational Coordination During Joint Operations*.)

COMMUNICATIONS, COMPUTERS, AND INTELLIGENCE

Ground reconnaissance units are a valuable combat information collections and battlespace shaping asset to the MAGTF. Rapid and efficient information flow between the combat intelligence center, the IOC, the SARCC, the COC, and the ROC requires an effective and timely dissemination link. This section discusses communications in general as it applies to ground reconnaissance units and then discusses the use of computers and intelligence.

Accurate and timely reporting of information to the supported commander and HHQ is essential. Tasking a ground reconnaissance unit to collect against the supported CCIRs and IRs will focus

the reconnaissance efforts on what the commander values as important. Reporting by the ground reconnaissance unit should be integrated into the MAGTF commander's reconnaissance and surveillance plan.

Communications

The rapid flow of information through the ROC to the supported unit's COC and finally to the IOC, via the SARCC, is vital for decisionmaking and directly affects the successful execution of operations.

Upon receipt of information from a deployed ground reconnaissance patrol by the ROC, the message is decrypted and forwarded to the supported unit's COC. The COC then disseminates the information to the SARCC for analysis.

The ROC can utilize runner or wire lines to relay patrol reports when collocated with the COC. If the ROC cannot be collocated with the COC then all information from the deployed teams must be sent to the COC via secure UHF, HF, or VHF communications or other tactical data network means.

The ROC must maintain constant communication with the COC. If the COC is incapacitated, then the SARCC assumes the mission of the COC. The ROC, COC, SARCC, and IOC must track the entire mission. Communications systems of the ROC to COC and COC to SARCC to IOC include—

- HF radio.
- UHF TACSAT radio.
- VHF radio.
- Digital Subscriber Voice Terminal (commonly referred to as DSVT) with facsimile.
- Local area networks (LAN) and wide area networks.
- Blue Force Tracker.

The ROC and the SARCC will also be equipped with the MSIDS: a digitized, lightweight video-reconnaissance system that can receive/transmit imagery, coordinate fires, and aid in the command and control of the deployed patrols via HF, UHF, TACSAT, and VHF radio communications.

Computers and Intelligence

The ROC and the SARCC require access to an ISR workstation that is typically linked to other intelligence network processors.

The ISR workstation allows the ROC and the SARCC to report all ISR tasks and RFIs in real time. Sending Level II intelligence reports directly to the SARCC and the IOC updates the intelligence database and promotes immediate analyzing and processing of the information. The workstation also allows the ROC access to current information in the friendly database, including imagery, enemy order of battle, situation maps, and enemy templates relevant to the ground reconnaissance mission. It also gives the unit access to current information from other intelligence databases.

CHAPTER 4
MISSION DEVELOPMENT

Successful ground reconnaissance missions require detailed mission analysis, planning, and coordination. The commander's collection plans describe the desired PIRs and IRs. The PIRs drive the conduct of ISR operations.

After ground reconnaissance units collect information, the ISR fusion elements continually evaluate it during the IPB process. The reasons and process related to the development of ground reconnaissance platoons' assigned missions are addressed in ISR operations, mission type orders, the mission planning folder, and operations security (OPSEC).

INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE OPERATIONS

Intelligence, surveillance, and reconnaissance operations are defined as "activities that synchronize and integrate the planning and operating of sensors, assets, and processing, exploitation, and dissemination systems in direct support of current and future operations. This is an integrated intelligence and operations function." For further information on defining ISR operations refer to JP 2-01, *Joint and National Intelligence Support to Military Operations*.

Intelligence, surveillance and reconnaissance operations are conducted to enable the commander to precisely focus joint elements of combat power and simultaneously execute current operations while preparing for future operations. Collaborative planning must be conducted between organizations so that ISR plans at each level are synchronized and integrated early in the Marine Corps Planning Process (MCPP). This allows subordinate units to task collection assets as early as possible to collect the needed information.

Key to successful accomplishment of the ISR operation is the targeted collection, analysis, and dissemination of intelligence that satisfies the needs of the supported unit commander. Ground reconnaissance units fill two roles in conducting ISR operations: executing the ISR plan for the supported unit (regiment, MEU, division, MEF, or JTF) and augmenting other supporting entities with ISR capabilities.

As the MAGTF conducts the MCPP, the commander and his staff identify PIRs that are needed to make informed decisions, which, along with friendly force information requirements, comprise the CCIR(s).

As soon as the G-2/S-2 and the G-3/S-3 know the CCIRs, they start formulating the ISR plan. This plan includes seeking answers from higher level organizations, and tasking subordinate units. The

MCPP produces an OPORD or an OPLAN. In addition to the main body of the order, the process produces Annex B (Intelligence) and Annex L (Intelligence, Surveillance, and Reconnaissance). Included in Annex L is the ISR tasking matrix that assigns subordinate units specific ISR tasks associated with collecting information.

The HHQ process results in the production of mission type orders for its subordinate units who, in turn, conduct their own MCPP. However, unlike the ISR efforts of HHQ, a reconnaissance unit does not focus on internal requirements. It focuses, instead, on gathering and disseminating information that meets the requirements and priorities of the higher level commander and staff.

The HHQ staff, as part of the MCPP, performs synchronization and ISR integration to develop its ISR plans (see fig. 4-1 on page 4-3). The ISR synchronization determines the IRs that must be met, compares them to the units or assets available and capable of collecting in the time and location required, and balances them with the higher unit's priorities.

The G-2/S-2 leads the coordinated staff effort that produces the ISR synchronization plan. The G-3/S-3 leads the ISR integration effort using the ISR synchronization plan to develop ISR tasks. These tasks are assigned to either the staff or subordinate units. The ISR tasks, in conjunction with task organization, graphics, fire support plans, coordinating instructions, and sustainment information, are merged together into the unit's ISR plan that is the basis for the OPORD.

Potential ground reconnaissance targets are first identified by the staff during the COA wargaming step of the MCPP. The G-2/S-2 OIC participates in the MCPP and, during COA wargaming, assesses which potential targets best suit the capabilities of the ground reconnaissance units. The G-2/S-2 OIC will seek the assistance of the ground reconnaissance unit OIC in evaluating the suitability and feasibility of potential targets. After evaluating the potential targets, the G-2/S-2 OIC will gain concurrence from the staff.

The G-3/S-3 will notify the ground reconnaissance unit OIC of the staff's decision and consult the reconnaissance OIC again on the suitability and feasibility of the designated target(s). (See fig. 4-2 on page 4-4). It is recommended that the ground reconnaissance OIC be notified before receiving the OPORD from HHQ because this serves as a WARNORD of the upcoming mission. This notification will allow the ground reconnaissance OIC to begin the troop leading steps—BAMCIS [begin planning, arrange for reconnaissance, make reconnaissance, complete the plan, issue the order, and supervise].

Simultaneously to the WARNORD being issued by the G-3/S-3, the G-2/S-2 begins developing information on each designated target for inclusion into target folders. The target information is an essential part of the ground reconnaissance platoon's mission planning folder.

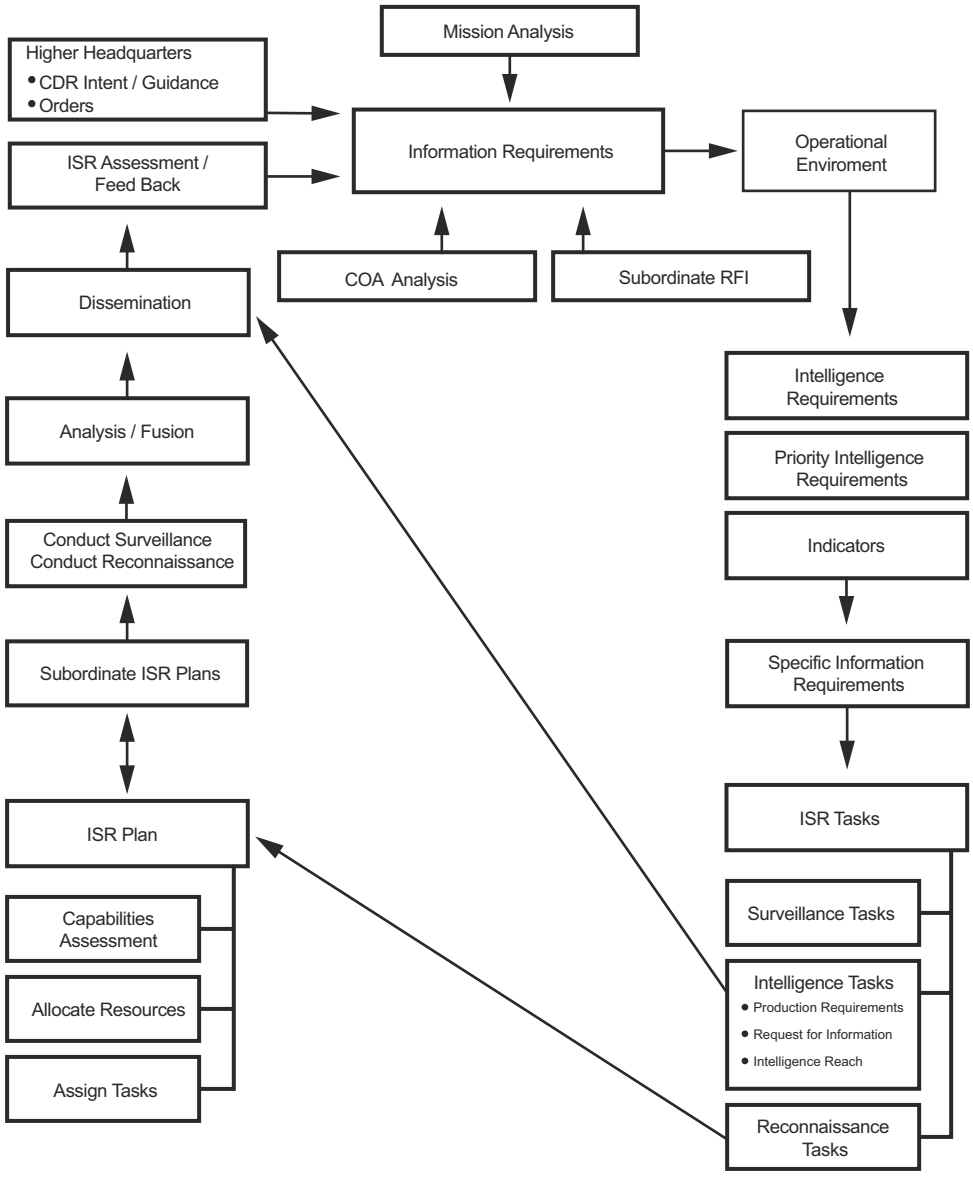


Figure 4-1. ISR Synchronization and Integration.

MISSION TYPE ORDERS

A mission type order is a technique for issuing combat orders that allows subordinates maximum freedom of planning and action to accomplish a mission. Mission type orders leave the "how" of mission accomplishment to the subordinate. How these two concepts work together is critical to understanding the mission development process for ground reconnaissance operations. (Refer to fig. 4-3 on page 4-5.)

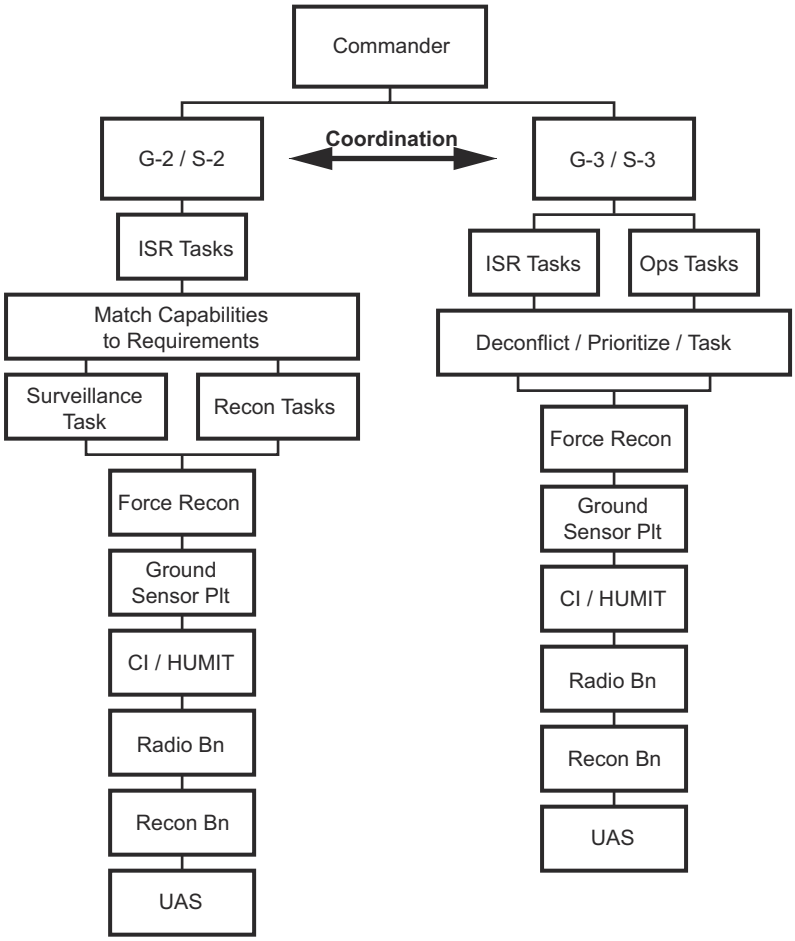


Figure 4-2. Ground Reconnaissance Mission Tasking.

Characteristics of Ground Reconnaissance Missions

All ground reconnaissance missons share the following characteristics whether the mission is amphibious reconnaissance, ground reconnaissance, battlespace shaping, or a specialized raid. Units receive detailed IPB from the G-2/S-2 that allows them to plan and rehearse in detail with internal and supporting assets to help ensure successful operations. Supporting assets (i.e., aviation, fire support, and communications) must support planning, insertion and infiltration, actions on the objective, exfiltration and extraction, and all contingencies.

Results of the ISR Process

The result of the ISR process is the designation of ground reconnaissance objectives/tasks and assignment of those objectives/tasks to ground reconnaissance platoons for action. The higher level unit avoids dictating how the mission should be conducted.

The deliberate planning cycle for a ground reconnaissance platoon begins when the platoon commander receives the target information from the G-2/S-2 as it becomes available. This allows

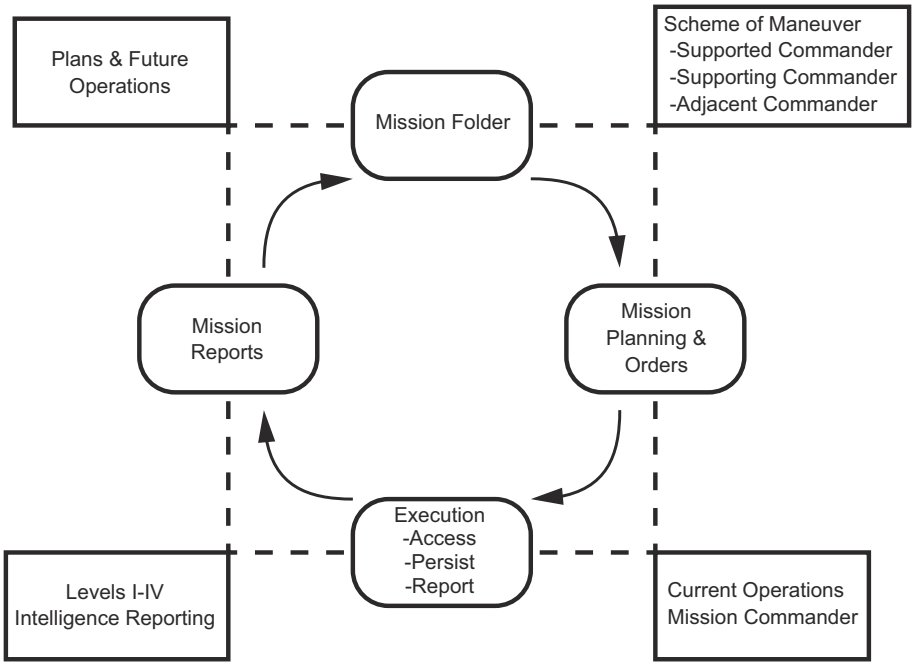


Figure 4-3. Mission Development Process.

the platoon commander to issue WARNORDs and begin to identify assets required to conduct the anticipated missions. Throughout the planning process, the platoon headquarters section coordinates with the SARCC.

The ground reconnaissance platoon commander completes and issues a detailed OPORD to the platoon providing information on the friendly situation, enemy situation, communications, and sustainment. The platoon commander normally writes the platoon mission statement and the intent, tasks, and purpose for each team with the assistance of the platoon sergeant. This information is essential to answering the question "why" the individual teams are deploying to a particular target/location to collect specific information for the supported commander.

Ground reconnaissance platoon planning is largely a bottom-up process that begins upon receipt of the platoon OPORD and mission planning folder. The mission planning folder provides information to assist the team in analyzing and completing their plan. The platoon/team OPORD is a mission type order that provides the who, what, when, where, and why of the mission; however, the OPORD does not dictate how the mission will be performed. The information should be as complete and thorough as possible. Additionally, the information should be presented in a form that is easily referenced and used. A common method of packaging is to provide annexes and appendices to the platoon OPORD that group information by the five phases of a ground reconnaissance team operation.

MISSION PLANNING FOLDER

The G-2/S-2 and the G-3/S-3 provide information and intelligence products to support the ground reconnaissance platoon mission. The ground reconnaissance platoon requests information from the higher level staff, which develops and packages the information and products. These products form the base of the mission planning folder that contains: the platoon WARNORD, OPORD, FRAGO, and the target folder. The target folder is created by and is the responsibility of the G-2/S-2. (For examples of the various platoon orders, target folder format, annexes, and checklists, refer to app. C of this publication.)

Development

The mission planning folder is prepared to aid the ground reconnaissance TL as he plans and executes the mission. It provides the TL with detailed information about his AO and mission, including maps, photographs, sketches, climatology, area geography, and recent enemy activity. It also provides coordination information, such as details about insertion and extraction, movement corridors, etc.

Development of the mission planning folder begins as soon as the ground reconnaissance unit is notified of a potential mission. The G-2/S-2 and G-3/S-3 along with the SARCC and ground reconnaissance platoon headquarters coordinate the mission and assemble the mission planning folder. Requesting information from the G-2/S-2 and G-3/S-3 staff elements is a critical step for the mission planning folder development. The G-2/S-2 develop specific information about the target and compile it into the target folder for inclusion into the mission planning folder.

Contents

The completed mission planning folder normally contains, at a minimum, the platoon OPORD, team mission-specific information, to include the team's five-paragraph order, and target information. The mission planning folder can also contain additional information or resources to assist the TL in mission planning. This information includes: excerpts from HHQ OPORD (as required); a copy of the platoon's SOPs; RFIs generated by the team; photographs, reports, and logs; and supply requests.

Ground Reconnaissance Team-Specific Operation Order

The ground reconnaissance team OPORD follows the standard five-paragraph order format with annexes. The information contained within the order will not repeat information contained within the platoon OPORD. The five-paragraph order is formatted to supplement the platoon OPORD, focusing on execution and actions at the objective. The following is a list of items typically covered in the platoon OPORD or team OPORD:

- Critical times:
  - Time schedule during planning.
  - Event times during the operation.
- Fire support:
  - Task and purpose.
  - Supporting units.

  - Unit locations.
  - Frequencies and call signs.
  - Type and size of fire support.
  - Target numbers and preplanned target list.
  - No-fire areas (NFAs) or RFAs numbers, including type of control.
  - High-value individual target list.
  - Gun target lines.
- Available air insertion and extraction platforms:
  - SPIE, low-level static line (LLSL), MFF insertion.
  - Supporting unit and point of contact.
  - Type and number of supporting aircraft.
  - Date-time group (DTG) for aircraft availability.
  - Air mission commander.
  - Location of pickup zone (PZ).
  - Tentative flight routes.
  - DTG for the initial planning conference and the air mission brief.
  - Suppression of enemy air defenses plan.
  - Weather impacts.
- Vehicle or ground insertion:
  - Supporting unit and point of contact.
  - Type and number of vehicles.
  - DTG for vehicle availability.
  - Pickup location.
  - Tentative routes.
  - Passage point DTG and location.
  - Frequencies and call signs.
  - Recognition signals.
  - Fire support.
- Host nation or partisan forces:
  - Supporting personnel.
  - Type of insertion platform, including time available and capabilities.
  - Coordination for linkup.
  - Linkup procedures.
  - Recognition signals.
  - Routes.
- Waterborne operational information requirements:
  - Supporting unit.
  - Insertion platform.
  - Tables showing currents and tide (blue water).

  - Tables showing currents and depths (brown water).
  - Terrain at landing beach.
  - Fire support.
  - Weather impacts.
- Communications data:
  - UHF TACSAT frequencies and availability.
  - HF propagation charts.
  - HF frequency list and availability.
  - VHF frequency list and availability.
  - Reporting procedures to ROC.
  - Initial point (IP) address.
- Evasion plan (for additional information on evasion plans, refer to app. D):
  - Personnel recovery procedure and evasion corridors.
  - DD Form 1833, Isolated Personnel Report (ISOPREP).
  - Location of selected area for evasion (SAFE) or designated area of recovery (DAR).
  - Documents that describe SAFEs.
  - Blood chits.
  - General survival information.
  - Civilian population information.
  - Cache and air resupply.
  - Medical information.
  - Border information.
  - Food and water sources.
  - Plant and wildlife data.
  - Endemic diseases.
  - Air tasking order (ATO), special instructions (SPINS), and airspace-control order.
- Maps, products, and imagery (the following supplements target folder information):
  - Gridded satellite imagery that may include possible LZs, recovery points, and linkup sites.
  - Line of sight (LOS) and field of view from the proposed observation point(s), 360 degrees from the objective.
  - Maps (include map datum) 1:250,000; 1:100,000; 1:50,000; 1:25,000.
  - Multi-space imagery products.
  - Elevation tint and slope tint.
  - Surface drainage.
  - Panoramic graphs.
  - Modified combined obstacle overlay.
  - Hydrology overlay and charts.
  - Cover and concealment overlay.
  - Operational graphics (friendly unit locations).

  - Flight corridors and air control points.
  - Enemy situational template (most dangerous and probable COAs).
  - Enemy event template.
  - Photos or pictures of enemy weapon systems and uniforms.
- Casualty evacuation.
- Quick reaction force.

OPERATIONS SECURITY

Ground reconnaissance units follow strict OPSEC procedures before, during, and after mission employment, which limits operational exposure of other ground reconnaissance platoons conducting missions. Ground reconnaissance unit's OPSEC measures are an important planning consideration. Ground reconnaissance mission classification seldom falls below SECRET during war or stability operations. This section discusses security classifications; mission classification; the need and procedures for separating platoons during planning; and security during coordination. (For more information on planning facilities and procedures for separating platoons during planning, refer to app. F.)

Personnel Security

Leaders within ground reconnaissance units require top secret sensitive compartmented information access to support planning efforts. These individuals include the following:

- Battalion/company commanders, XOs, and operations chiefs.
- Battalion operations officers.
- Ground reconnaissance detachment leaders, platoon commanders, platoon sergeants, and team leaders.
- Any ground reconnaissance Marine acting as an LNO.

Each Marine holding the MOS 0321 (enlisted) and MOS 0307 (officer) must possess a current secret clearance or higher. The information that a reconnaissance Marine needs for planning purposes is sometimes classified above the individual team member's access level.

A reconnaissance Marine who fails the mandatory investigation for a required security clearance will receive a transfer to a position or unit with lower clearance requirements. Commanders must entrust reconnaissance Marines with mission-sensitive and classified information.

Mission Classification

Ground reconnaissance missions receive secret-level classification due to the vulnerability of a six-man element, which could be operating deep behind enemy lines or far from support. Ground reconnaissance platoon/team locations should seldom be posted or mentioned on a computer LAN, graphic or written OPORD, intelligence summary, or intelligence report regardless of the classification of the dissemination vehicle.

The SARCC OIC, ground reconnaissance LNO, IOC, OIC, the G-2s/S-2s, the G-3s/S-3s, and the commanding officers are normally the only personnel outside of the ROC that "need to know" the platoon/team locations. The G-3/S-3 publish NFAs or RFAs and disseminate the information to all units that could be operating within the AO. Higher headquarters generally needs to coordinate with the special operations coordinator LNO as special operations might be operating in the same AO with ground reconnaissance assets.

Isolation

Ground reconnaissance platoons plan independently. Operational security considerations require that each platoon knows only the specific information that is pertinent to their mission. While commanders can make exceptions to this general rule, each platoon is only provided the information they need to conduct their specific mission. What a ground reconnaissance platoon needs to know (critical information) generally depends on mission proximity; for example, platoons/teams may require support from another platoon/team in the form of a communications relay.

It is vital that planning facilities offer isolation from distractions, Marines external to the platoon, and collateral duties associated with operational tempo. Another vital aspect of planning facilities is a secure area to display classified information about the mission, prepare equipment, and rehearse for the upcoming operation.

Keeping mission information internal to the ground reconnaissance platoon/team ensures that, if one platoon/team is compromised and later captured, the enemy can only obtain information about that platoon/team and its mission.

Ground reconnaissance platoons/teams limit communicating with each other while conducting operations. Radio communications are vulnerable to direction-finding equipment. Threat forces implementing force protection measures will target areas where ground reconnaissance platoons/teams would likely be operating. The less a platoon/team knows about other platoon/team missions, the more secure they and the other ground reconnaissance units remain as a whole.

COORDINATION

Coordination, such as air mission briefs, can also compromise a ground reconnaissance mission. Reconnaissance Marines must consider OPSEC when conducting coordination with supporting units. For example, during an air mission briefing, everyone must avoid discussing information not pertinent to the coordination (i.e., objective location, NAIs, or mission duration). Only relevant details should be discussed such as flight routes, check points, call signs, and contingencies.

CHAPTER 5
PLANNING OVERVIEW

Ground reconnaissance platoon operations normally have five distinct phases: planning, insertion/infiltration, execution (actions on the objective), exfiltration/extraction, and recovery. Controlling or supporting deployed ground reconnaissance platoons/teams can overlap into more than one phase.

PLANNING PHASE

Detailed planning at all levels helps to ensure mission success and platoon/team survival. The planning phase starts when the platoon commander receives the OPORD from the G-3/S-3 and the mission folder containing inputs from the G-2/S-2 and G-3/S-3. It extends throughout the final inspection of the ground reconnaissance platoon/team. To ensure that the platoon completes each of its planning tasks, it will adhere to a detailed timeline. The length of time available determines whether the platoon conducts deliberate or crisis action planning. Deliberate planning is conducted when there are 96 hours available for the planning cycle. Crisis action planning is conducted when there are less than 96 hours available for the planning cycle.

Although ground reconnaissance platoons and teams should not be held in reserve, the higher level unit should consider the need to conduct continuous operations. Reconnaissance platoons/teams need to recover from missions and staffs must anticipate needs for future operations.

General guidelines for operational tempo are one-third of the platoons/teams are conducting missions; one-third are preparing for deployment; and one-third are recovering, training, and preparing to receive a new mission.

As information is collected and reported from deployed platoons/teams, each organization above the ROC analyzes it to determine if it met any IRs. This allows each organization to make an initial determination if it can or must task new ground reconnaissance platoons/teams, reallocate other assets to collect required information, or begin collection on other priorities.

Reconnaissance platoons/teams generally require 96 hours for a deliberate planning cycle. Planning time can be reduced by well-written, understood, and rehearsed unit SOPs. Additional risks must be assumed when conducting time-reduced planning cycles (crisis action planning) and will result in increased reliance on a supporting staff external to the platoon.

Ground reconnaissance platoons/teams are capable of employment on short notice. In situations where less time is available than the recommended 96 hours for deliberate planning, the potential

benefit of the mission must be weighed against the risk associated with crisis action planning and execution. At a minimum, the following information is needed for crisis action planning and execution:

- Mission statement, to include area or object to observe, latest time information of value, and anticipated length of mission.
- PIRs, IRs, associated specific information requirements (SIRs), ISR tasks, and other RFIs.
- Enemy situation in the target area.
- Commander's intent for intelligence.
- Method of insertion with abort criteria.
- Fire support plan to include assets available.
- Communications plan.
- Linkup plan, if applicable.
- Extraction plan.
- Contingency planning guidance.

Arrange for Reconnaissance

Reconnaissance. Ground reconnaissance units and planners may require preliminary intelligence and reconnaissance efforts by other assets to provide information on insertion/extraction areas, routes, and/or objectives. These may include: satellite, aircraft, or UAS.

Make a Tentative Plan. Making a plan combines mission analysis, COA development, COA analysis, COA comparison, and COA approval.

Support. Ground reconnaissance personnel may require special technical support, briefings by subject matter experts, or debriefs of personnel with knowledge of the target area. Intelligence briefings, preferably presented by specialists, present detailed information on such matters as the enemy situation, terrain, astronomical data, weather, and hydrography in the objective area. Additionally, information relative to the local populace, escape, evasion, and survival may also be briefed.

Make Reconnaissance

Reconnaissance. In many cases, ground reconnaissance unit personnel may be able to conduct a preliminary reconnaissance via maps or imagery. In some cases, however, the unit commander or members of the executing platoon/team may find it useful or necessary to conduct a visual reconnaissance of a route or specific area. This may be done by helicopter or even by conducting a limited preliminary ground reconnaissance mission to gain essential planning information.

Coordination. Preliminary planning will include arrangements with various supporting units and agencies for support such as transportation, fire support, special equipment, or logistical requirements. Support personnel should make themselves available for coordination throughout the planning phase.

Complete the Plan

The ground reconnaissance plan consists of five paragraphs as well as supporting tabs and annexes.

Situation. Describes the situation of the parent unit as it relates to the ground reconnaissance unit's overall mission.

Mission. Describes the ground reconnaissance unit's overall mission during this operational phase. It is a simple, concise expression of the essential tasks the unit must accomplish, and the purpose to be achieved. The mission statement says who (the unit), what (the task), when (either the critical time or on order), where (location), and why (the purpose of the operation). Each mission statement has three distinct elements: operation, task, and purpose.

Operation. An operation is a military action consisting of all the processes involved with combat—movement, supply, attack, defense, and maneuvers to gain objectives. Ground reconnaissance units conduct the following four operations:

- *Surveillance*. The systematic observation of airspace or surface area by visual, aural (hearing), electronic, photographic, or other means.
- *Reconnaissance*. Any action taken to obtain information about an operational area. It includes any visual or other detection methods taken to learn the enemy's or potential enemy's activities, resources, and the areas meteorological, hydrographic, or geographic characteristics.
- *Target Acquisition*. The detection, identification, and location of a target in sufficient detail to permit the effective employment of weapons against it.
- *Target Interdiction*. Any action taken to divert, disrupt, delay, or defeat the enemy's surface military potential before it can be used effectively against friendly forces.

Task. A task is clearly defined, measurable activity accomplished by individuals and organizations. A task includes specific actions that contribute to mission accomplishment or other requirements. A task is definable, obtainable, and decisive; it is either specified or implied. Common ground reconnaissance tasks (see table 5-1 on page 5-4 for ground reconnaissance tasks by operation) are as follows:

- *Observe*. The visual, audible, mechanical, electrical, and/or photographic monitoring of enemy activities. It applies to missions in which the enemy's location is known or strongly suspected.
- *Locate*. To search or examine an area to find an enemy (or their equipment) known to be present in the area, but whose specific location is unknown.
- *Detect*. To discover or discern the existence or presence of enemy activity. This task applies to missions in which little, if anything, is known about the enemy. The enemy may or may not be present.
- *Determine*. To decide or settle conclusively. This task applies to missions in which much information is known about the enemy. However, some questions still exist about their exact disposition, location, or content. This mission is to gather one or two specified IRs.
- *Identify*. To positively recognize enemy units, formations, equipment, etc.

Table 5-1. Ground Reconnaissance Tasks by Operation.

Operation	Surveillance	Reconnaissance	Target Acquisition	Target Interdiction
TASKS:	A. Observe B. Locate C. Detect D. Determine E. Identify F. Evaluate G. Report H. Confirm I. Deny	A. Report B. Locate C. Detect D. Identify E. Confirm F. Deny G. Pinpoint	A. Mark B. Locate C. Detect D. Identify E. Pinpoint	A. Attack-by-fire B. Suppress C. Disrupt

- *Evaluate*. To examine, judge, and place value or worth on the condition and state of specified structures or enemy capabilities. Structures or enemy location are known.
- *Confirm*. To support or establish certainty or validity.
- *Deny*. To prove untrue or invalid.
- *Report*. To communicate collected information accurately and in a timely manner.
- *Mark*. To designate a target by using lasers or other marking devices.
- *Pinpoint*. To locate and precisely identify a target for engagement without using lasers.
- *Measure*. To estimate by comparing two distances.
- *Attack by Fire*. To use direct fires, or supported by indirect fires, to engage an enemy without closing with him to destroy, suppress, fix, or deceive them.
- *Suppress*. This results in the temporary degradation of the performance of a force or weapons system below the level needed to accomplish the mission.
- *Disrupt*. To integrate direct and indirect fires, terrain, and obstacles to upset an enemy's formation or tempo, interrupt their timetable, or cause their forces to commit prematurely or attack in a piecemeal fashion.

Purpose. A purpose is an intended or desired result.

Execution. The concept of operations/commander's intent and the reconnaissance team employment sequence describe general considerations for mission execution as they apply to the ground reconnaissance unit as a whole. Any following sections describe the specific mission of a particular subelement of the unit.

Concept of Operations and Commander's Intent. The concept of operations and commander's intent describes the general employment of ground reconnaissance assets during the phase of operations to which the plan applies and the overall purpose these will support.

Reconnaissance Team Employment Sequence. The reconnaissance team employment sequence describes the method of employment and the order in which platoons/teams will be inserted.

Tasks. The task states the mission and collection objectives for each subelement and provides the following specific information:

- *Reconnaissance Operation Area*. Describes and gives boundaries of the reconnaissance operations area. If it describes a route reconnaissance, it provides a general description of the routes to be taken.
- *Insertion and Extraction*. Provides details required for platoon/team insertion and extraction, including means, date, time, and place. Alternate means are also provided.
- *SERE and Recovery*. Lists long- and short-range evasion means and how recovery will be undertaken.
- *Detailed Patrol Plan*. The patrol plan includes designation of patrol members; the specific area of operation; patrol routes; schedule of events for landing, reports, and withdrawal; landing and recovery methods; specific communications procedures; equipment requirements; and alternate procedures.
- *Coordinating Instructions*. Describes any coordinating instructions required to support the specific mission, including integration with other unit intelligence and reconnaissance operations, intelligence reporting criteria, reporting formats, briefing times and places, debriefings, no communication plans, and abort authority.

Administration and Logistics. These paragraphs describe what logistical support is available for each supporting agency to assist the units in accomplishing their missions, including means of handling casualties and enemy prisoners of war (EPWs).

Command and Signal. These paragraphs describe C2 relationships as they affect ground reconnaissance unit operations, information management, supporting CIS, and other C2 information that is applicable to the entire unit. It includes locations of key C2 nodes (ROC and SARCC), frequencies and call signs, communication windows, and locations of key personnel during operations.

Annexes. These are included in the ground reconnaissance OPORD as required.

Issue the Order

In practice, ground reconnaissance platoons/teams are seldom briefed in a single formal presentation. Planning for reconnaissance gradually progresses from the general to the specific and flows from the supported commander through the chain of command to the individual team members. Briefings are frequent, often repetitious, and progressively more detailed.

When issuing the detailed OPORD, visual aids should be used to reinforce information and to help ensure that the platoon/team fully understands all aspects of the mission. Visual aids may include terrain models, objective sketches, charts, photos, maps, and overlays.

Supervise

Battalion, Company, Platoon Commanders. The ground reconnaissance unit commander coordinates external support as well as supervises and assists subordinate leaders throughout the planning, execution, and recovery phases of the operation. Specific responsibilities of the commander include conducting a confirmation brief.

All personnel involved with the preparation and execution of the assigned operation should attend the confirmation brief. Attendees should include the ground reconnaissance unit commander; the G-2/S-2 and G-3/S-3; the OICs of the P&A cell and the SARCC; other relevant staff, and supporting unit personnel.

Battalion/Company Operations Chief and Platoon Sergeants. The reconnaissance enlisted leaders supervise the unit throughout the planning and preparation phase to ensure timely completion of all required tasks.

- The platoon/team takes only the equipment required for the mission.
- All equipment is functional, complete, secured, and evenly distributed.
- Resupply bundles and packages are complete and meet unit SOP.
- Insertion vehicle and aircraft preparations are complete and meet unit SOP.

Rehearsals. Rehearsals are the process of practicing a plan before actual execution. Rehearsals assist the executing unit by ensuring that all personnel are thoroughly familiar with the plan, relevant SOP items, and any deviation from the SOP required by the mission. It clarifies the plan and identifies any inconsistencies or misunderstandings. Rehearsals must be conducted, regardless of the time allotted for planning (see table 5-2, on page 5-6, for rehearsal priority of actions). Effective rehearsals require imagination and attention to detail. Rehearsals should be repeated until all issues are resolved.

Characteristics of rehearsals for a reconnaissance mission are as follows:

- Must be conducted in a secure and isolated area.
- Should be conducted on terrain and under astronomical, hydrographical, and meteorological conditions closely approximating those anticipated on the operation.
- The exact ships, aircraft, and supporting forces should be used whenever possible.
- The use of an “opposing force” should be used when possible.
- Incorporate as many contingencies as can be anticipated, including simulated casualties among key personnel with other platoon/team members assuming their duties.
- Leaders should continually ask unit members to answer mission-specific questions as well as incorporate sand table briefings, a map study, and photograph examinations into all rehearsals.

Backbrief. When mission planning is complete, the ground reconnaissance platoon/team briefs back the entire mission to the commander or to the commander’s designated representative. The backbrief ensures the commander that the reconnaissance unit understands and is prepared for the mission. The backbrief can be shortened to accommodate condensed planning time or at the commander’s request, based on his knowledge of the unit’s experience and on who attends the backbrief. The ground reconnaissance unit should rehearse the backbrief to ensure that all members understand all aspects of the operation.

Table 5-2. Rehearsal Priority of Actions.

Rehearsal Actions	Rehearsal Type		
	Crisis Action Planning/ Critical	Detailed Planning/ Important	Detailed Planning/ Useful
Actions in the objective area (entering, maintaining, and sterilizing the hide site, ORP, OP, and patrol bases)	X	X	X
Off loading and assembly procedures at points of insertion	X	X	X
Movement formations		X	X
Rally point procedures		X	X
Linkup procedures		X	X
Security halt procedures		X	X
Actions at possible danger areas		X	X
Reaction drill for aircraft flyover (friendly or enemy)		X	X
Countertracking techniques		X	X
Actions on enemy contact (chance, near and far ambush, sniper or air attack, indirect fire, flares)		X	X
CASEVAC procedures		X	X
Special actions (as required) and use of new or unfamiliar equipment		X	X
Procedures for emplacing and recovering cache		X	X
Actions at recovery points or contact points		X	X
No-communications plan		X	X
Communications during scheduled windows and initial entry		X	X
Transportation contingencies			X
Sand table briefings			X
Map study			X
Photographic examinations			X

Continuing Actions. During mission execution by ground reconnaissance platoons/teams, the ground reconnaissance unit commander is responsible for supervision of continuing actions such as—

- Monitoring intelligence reporting and CIS equipment status.
- Ensuring that all incoming reports are properly recorded, processed, and disseminated.
- Providing deployed platoons/teams with any new, relevant information or intelligence including changes in METT-T, changes in command and control, intelligence retasking (e.g., new missions, changes in PIRs and IRs), and fire support updates.
- Ensuring any necessary logistical resupply of deployed platoons/teams.
- Preparing for emergency extraction/CASEVAC/CSAR.

INSERTION AND INFILTRATION PHASE

The insertion and infiltration phase extends from the point of embarkation to the arrival in the objective area. The ground reconnaissance unit commander is responsible for supervising the execution of insertions. The commander ensures that prior coordination is done, that adequate alternatives and contingency plans are in place, and that supporting units fully understand and perform their role.

Insertion

Insertion methods for ground reconnaissance platoons/teams include—

- High-altitude, high-opening parachute technique (HAHO) airborne operations.
- High-altitude, low-opening parachute technique (HALO) airborne operations.
- Tandem Offset Resupply Delivery System (TORDS) for personnel or equipment.
- LLSL airborne operations.
- Closed-circuit diving operations.
- Open-circuit diving operations.
- Combat swimming.
- SPIE.
- HRST.
- Airmobile insertion.
- Vehicle insertion.
- Combat rubber reconnaissance craft (CRRC).
- Stay behind operations.
- Foot movement.

Infiltration

The insertion normally ends after the platoon/team caches any non-mission essential equipment and the insertion platform departs the loiter area. Generally, the infiltration phase continues with the unit's movement from the point of insertion to the security halt, and ends before the unit occupies the ORP.

Ideally, insertion and infiltration occur during times of limited visibility. If the unit must halt during periods of increased visibility, they will establish a clandestine patrol base. During infiltration, patrol members record the unit's movement in their patrol logs. Patrol log details include—

- General direction of movement.
- Deviations from planned infiltration route.
- Terrain and weather including the effects on friendly and enemy patrols.
- Enemy sightings en route.
- Signs of activity.

- Key grid locations.
- Any peculiarities including map corrections.
- Times of key events.

EXECUTION PHASE—ACTIONS ON THE OBJECTIVE

The ground reconnaissance patrol establishes a security halt and the leader reconnoiters to identify an ORP. After the unit establishes the ORP, the leader moves out to pinpoint the objective or NAI and locates a tentative OP.

Once the leader's reconnaissance is complete, the patrol will move to and establish a hide site, gaining communications with the ROC. The team will establish an OP and will maintain "eyes on" the objective and maintain continuous communications with the hide site. The OP generates Level I intelligence reports and relays them to the hide site.

The hide site sends information to the ROC via HF or UHF TACSAT communications. Once communications are received, the ROC uses the LAN to forward all reports and information from the ground unit to the SARCC via the supported unit's COC. The SARCC disseminates all information through the IOC. If the ground reconnaissance patrol cannot establish communications, the patrol and the ROC will execute the no communications contingency plan that was developed during the planning phase.

The ground reconnaissance patrol will continue to collect information and send reports to the ROC until the patrol meets the mission completion criteria or until the latest time of information value is reached. The reconnaissance patrol reports during designated communication windows; however, if the report is information answering a PIR, out of the communication window, the patrol will use FLASH traffic. After the patrol withdrawals from the objective, they disseminate information, collecting all OP logs and objective sketches.

EXFILTRATION AND EXTRACTION PHASE

Exfiltration

The exfiltration begins after the patrol links up and disseminates information at the ORP and ends when the patrol reaches the extract site. Exfiltration routes will differ from the infiltration routes used. During exfiltration, patrol members will record the patrol's movement in their patrol logs using the same criteria as previously described in the "Infiltration" section.

Extraction

The extraction begins once the patrol has established security at the extract location and ends upon their arrival at the debrief location. The ground reconnaissance unit commander is responsible for supervising the execution of extractions. The commander ensures that prior coordination is done,

that adequate alternatives and contingency plans are in place, and that supporting units fully understand and perform their roles. Extraction methods for ground reconnaissance platoons/ teams include—

- Closed-circuit diving operations.
- Open-circuit diving operations.
- Combat swimming.
- SPIE.
- Airmobile extract.
- Vehicle extract.
- CRRC.
- Foot movement.
- Recovery by advancing friendly forces.
- Recovery by indigenous personnel or HN forces.

RECOVERY PHASE

The recovery phase begins when the ground reconnaissance patrol returns to the debriefing site, normally located at the planning facility, and begins the multiphase debriefing process.

Debrief

Debriefing is the means by which information is obtained from ground reconnaissance team members by interrogation. Ground reconnaissance patrols should be debriefed as soon as possible after recovery, preferrably within 2 hours. All members of a ground reconnaissance patrol will attend every phase of the debriefing process.

The debriefing covers the patrol's actions and all related details, chronologically, from the start of the insertion phase, through arrival at the debriefing site. Specific information collected as a result of the mission is obtained during debriefing. Additionally, interrogation is used to obtain information regarding sightings or observations whose significance may not be readily apparent to patrol members. Debriefing is important in the intelligence collection effort, especially when used to clarify and expound on information received via reporting. The debriefing process is normally conducted in the following sequence: initial debrief; post initial debrief; reconaissance after-action, information, dissemination, and exploitation report (RAIDERREP); review of documents and materials; and follow-up debrief.

Initial Debriefing. This debriefing should help answer PIRs, IRs, SIRs, ISR tasks, and other RFIs. The initial debriefing is quick and to the point with the debriefer choosing the format and line of questioning.

At the conclusion of the initial debriefing, the intelligence staff gathers all maps, logs, papers, exposed film, video tapes, photographs, recovered equipment, and other items of intelligence

interest. Then, they thoroughly review all collected items for data and formulate more detailed questions for the next stage of debriefing.

The patrol remains separated from outside contact until after the follow-up debrief, but they can start recovery operations (post-mission maintenance, eating, showering, sleeping, etc.).

Post Initial Debriefing. This debriefing is conducted with a communications representative and covers communication-specific information such as when certain antennas worked best and which frequencies worked best.

Reconnaissance After-Action, Information, Dissemination, and Exploitation Report. The RAIDERREPs "are produced when information is obtained that satisfies collection requirements of general interest or clarifies and expands Level I Intelligence Reports." (NAVMC 3500.55B) The RAIDERREP identifies the who, what, when, where, why, and how of the operation. It permanently records the patrol's major activities from planning to debriefing.

Organized in accordance with the warfighting functions, the RAIDERREP serves as an extremely important template for comparison with past missions and planning for future operations. In this report, the patrol leader reflects on the operation and makes recommendations for the future. The patrol identifies what did and did not work, identifying how the unit's current TTP need to change.

Review of Documents and Other Materials. The intelligence staff processes all of the information collected by the patrol and the RAIDERREP. Individual patrol members may be requestioned to clarify a sketch or patrol log entry. The G-2/S-2 and G-3/S-3 collect information on the adequacy of the mission planning folder in order to determine how effective intelligence and operations support was during the mission. Evaluating the mission planning folder can provide valuable lessons learned that will help improve intelligence and operations support for future missions. The original overlays and planning products should not be destroyed. After properly classifying and annotating them, the G-2/S-2 files them for future reference by patrols conducting missions in the same area.

Follow-up Debriefing. At this debriefing, the patrol leader summarizes the operation, focusing on the patrol's stated and implied missions. The debriefer and staff members who are present take turns questioning the patrol members, using the platoon's RAIDERREP as a reference. This debriefing gives the patrol members the opportunity to raise issues of support, communications, and coordination as well as any other deficiencies during planning or execution.

A trusted and knowledgeable intelligence representative, ideally from the intelligence section of the headquarters originating the mission, will conduct the follow-up debriefing. If an intelligence representative is not available, the debriefing will be conducted by the ground reconnaissance unit commander.

The interrogating personnel will prepare reports based on the information obtained during the debriefing. The timely collection, analysis, and dissemination of information recovered during the debriefing can provide many answers needed for follow-on missions in the objective area.

RAIDERREP

The recovery phase ends with the submission of the finalized RAIDERREP. The ground reconnaissance plan contains instructions relevant to the specific intelligence reporting criteria to include times and methods for reporting the collected information.

Subject to security considerations, ground reconnaissance patrols may transmit their RAIDERREP from their reconnaissance AOs. In many cases, reconnaissance patrols' reports are required by the parent unit commander as soon as possible after recovery or as directed in the current intelligence dissemination plan.

The RAIDERREP should contain the specific mission, a summary of the information collected as a result of the mission, and any information (e.g., sketches, imagery, etc.) obtained regarding the enemy, whether or not such information was specifically requested. If no requested enemy, weather, or terrain information is obtained, a negative report is mandatory. A formal written RAIDERREP will accompany items not transmissible by radio, such as soil samples, exposed film, overlays, and annotated maps or charts.

CHAPTER 6
RECONNAISSANCE OPERATIONS

The success of ground reconnaissance operations depends on thorough planning, acquisition of ISR tasks and RFIs, rapid and timely reporting, and in most cases avoidance of detection by the enemy or civilian population.

Ground reconnaissance platoons collect critical information and influence the battlefield for the commander. Answers to the commanders' PIRs directly affect the commander's decisionmaking and dictate the successful execution of military operations. This chapter discusses the following aspects of ground reconnaissance platoon operations:

- Reconnaissance operations.
- Amphibious reconnaissance and underwater reconnaissance operations.
- Riverine operations.
- Surveillance operations.
- Combat assessment.
- Battlespace shaping.
- Urban terrain operations.
- Specialized limited scale raids.
- Special missions.

For information on how to prepare the force to conduct ground reconnaissance operations, refer to appendix B. For operational vignettes of ground reconnaissance support during the range of military operations to include steady state security posture, irregular warfare, and a major combat operation, refer to appendix F.

GROUND RECONNAISSANCE

The four forms of ground reconnaissance operations are area reconnaissance, zone reconnaissance, route reconnaissance, and force-oriented reconnaissance. Ground reconnaissance missions greatly increase a patrol's vulnerability and chances of compromise. The mobility of ground reconnaissance platoon/team is generally limited to foot movement. Therefore, the amount of equipment carried reduces the size of the area they can reconnoiter.

Area Reconnaissance

Area reconnaissance is a directed effort to obtain detailed information concerning the terrain or enemy activity within a prescribed area, such as a town, ridgeline, woods, or other feature critical

to operations. The location may be given as a grid coordinate or an objective on an overlay. An area reconnaissance can be made of a single point (i.e., a bridge or an installation). This could include an enemy headquarters, key terrain, critical installations, linear obstacles, and other similar targets. Characteristics of an area reconnaissance include emphasis being placed on reaching the area without being detected and hostile situations encountered en route are developed only enough to allow the reconnoitering units to report and bypass.

Before executing an area reconnaissance, the ground reconnaissance platoon/team develops a detailed plan using all available information. Once deployed, the patrol leader pinpoints the reconnaissance objective or NAI. They will then locate the best vantage points for static OPs (see fig. 6-1). Static OP techniques include both long- and short-range observation.

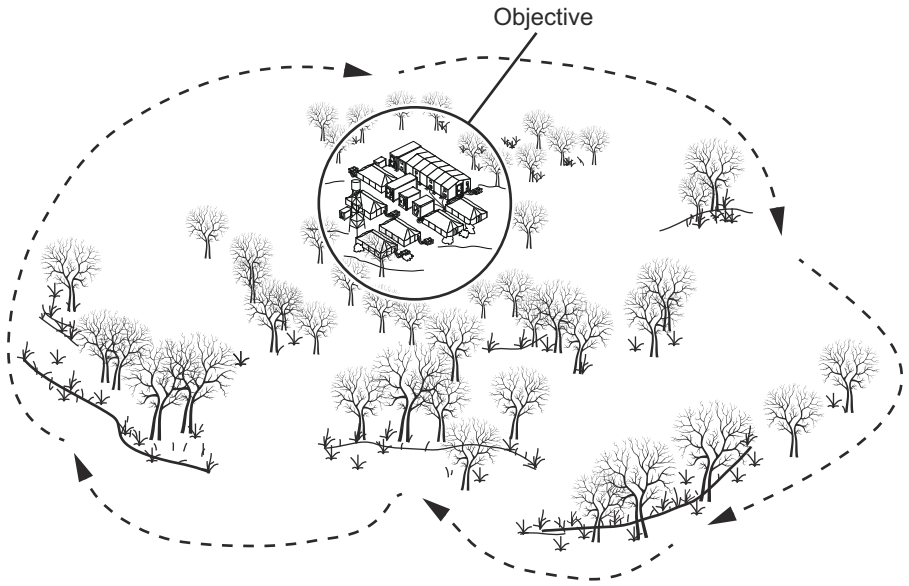


Figure 6-1. Area Reconnaissance.

Long-Range Observation. Long-range OPs are used whenever METT-T will allow the patrol to gather information from a distance. These OPs are the best way to conduct area reconnaissance as the team is better able to avoid detection and is located outside of enemy small arms range and local security measures. Long-range OPs also prevent the patrol's NFAs and RFAs from overlapping with the objective area.

Long-range observation will require the patrol to occupy a series of OPs until they gather all required information from the objective area. Each observation site must have a good view of the objective area and adequate cover and concealment. The routes between and from OPs to the hide site will also require good cover and concealment.

Short-Range Observation. Short-range OPs are used whenever METT-T requires a close approach to the objective to gain information. Observing at short ranges increases the chance of detection as the team is located inside enemy small arms range and local security measures. The enemy may employ anti-intrusion devices (e.g., trip flares) and patrols near key installations.

Patrols can conduct short-range observation from OPs, but they will typically have to move near the objective before they can find a place where they can observe (i.e., a jungle environment). In some cases, the patrol may gather information by listening, even though they cannot see the enemy. When a patrol must observe from short-ranges, it is imperative that they use every means available to avoid detection. For example, inclement weather can reduce the sounds of the unit's movement and limited visibility favors short-range observation.

Zone Reconnaissance

Zone reconnaissance is a directed effort to obtain detailed information on all routes, obstacles (to include chemical or radiological contamination), terrain, and enemy forces within a zone defined by boundaries. A zone reconnaissance is normally assigned when the enemy situation is vague or when information concerning cross-country trafficability is desired.

Zone reconnaissance concerns itself with the total integrated intelligence picture of a space defined by length and width. The commander specifies the routes and/or areas of interest within the zone to be reconnoitered that is usually described by a line of departure, lateral boundaries, and a limit of advance.

The size of the area depends on the potential for information on enemy forces, terrain, and weather in zone; the requirements levied by the commander; and the ground reconnaissance forces available to exploit the intelligence value of the zone.

There are three common methods for conducting a zone reconnaissance: fan method, converging routes method, and the successive-sectors method. A ground reconnaissance patrol can employ any or all of these; however, other methods of patrolling are acceptable as long as they accomplish the mission.

Fan Method. The patrol leader selects a series of ORPs throughout the zone, then selects the patrol routes to and from the ORP that form a fan-shaped pattern around the ORP (see fig. 6-2 on page 6-4). The routes must overlap to ensure that the patrol reconnoiters the entire area. After the patrol has reconnoitered the area (fan), the patrol reports the information, and then moves to the next ORP and repeats the actions.

Converging Routes Method. The patrol leader selects an ORP, reconnaissance routes through the zone, and then a linkup point (see fig. 6-3 on page 6-4). A subelement is sent on each route who will normally reconnoiter their routes by using the fan method. The entire patrol will meet at the designated linkup point at the appointed time.

Successive-Sector Method. This method is a continuation of the converging routes method. The patrol leader selects an ORP, a series of reconnaissance routes, and linkup points. The actions of each subelement from each ORP to each linkup point are the same as in the converging routes method; that is, each linkup point becomes the ORP for the next phase. When the subelements link up, the patrol leader again designates reconnaissance routes, a linkup time, and the next linkup point (see fig. 6-4 on page 6-5). These actions continue until the patrol has reconnoitered the entire zone.

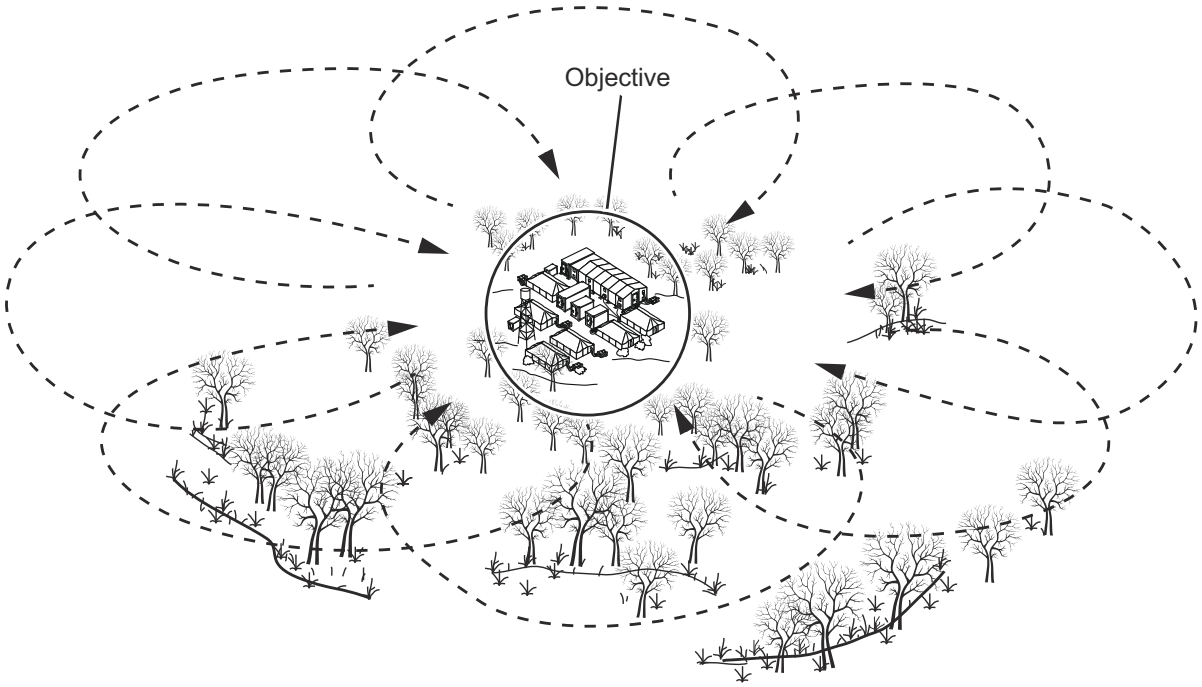


Figure 6-2. Fan Method.

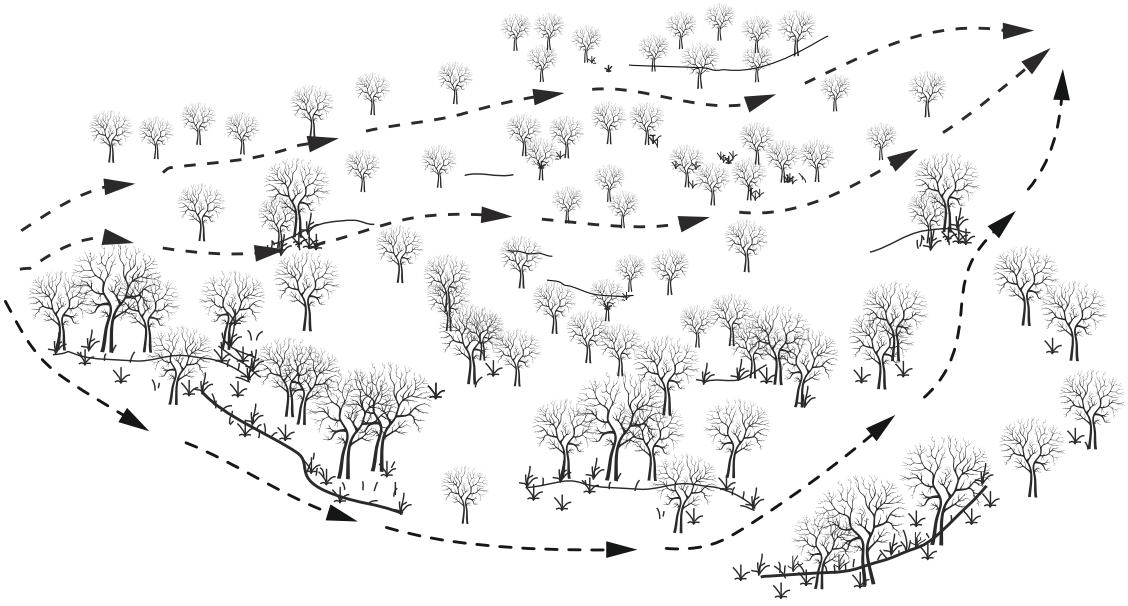


Figure 6-3. Converging Routes Method.

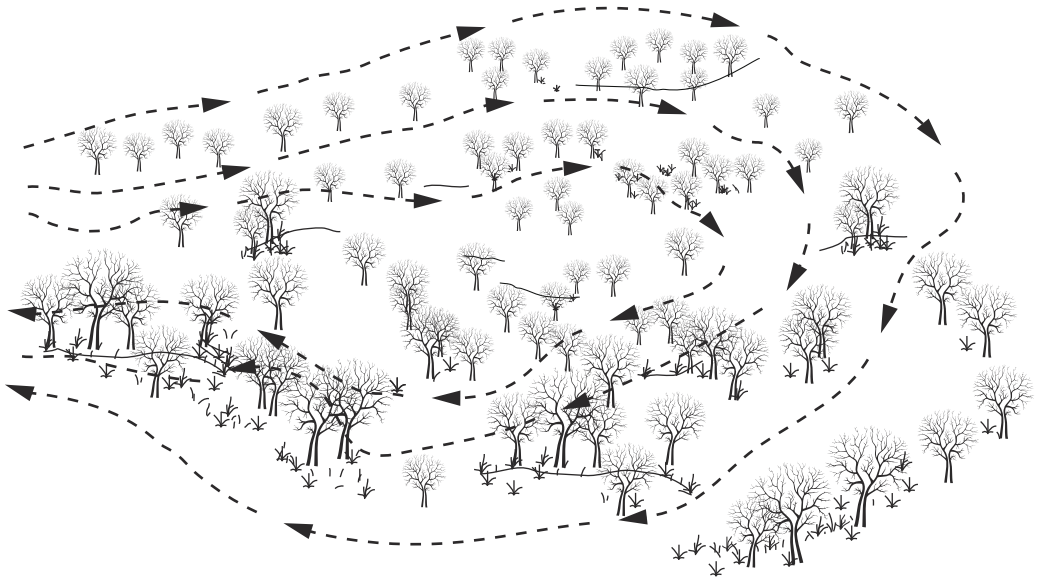


Figure 6-4. Successive-Sector Method.

Route Reconnaissance

A route reconnaissance normally precedes the movement of friendly forces and is focused along a specific line of communication, such as a road, railway, or waterway. Route reconnaissance provides new or updated information on the conditions and activities along a specific route and the surrounding terrain that could influence movement. Additionally, route reconnaissance will focus on all terrain from which the enemy could influence movement along that route. The reconnaissance unit will provide information on the following considerations:

- Trafficability, including potential weather-induced hazards.
- Danger areas and critical points.
- Vehicle weight and size limitations.
- Locations of obstacle emplacement and potential bypass.
- Observation and fields of fire along the route and adjacent terrain.
- Locations along the route that provide good cover and concealment.
- Landing and pickup zones along the route.
- Any bridges by construction and type, estimated dimensions of each, and any vehicles seen crossing the bridge as this helps determine the bridge's load classification.

When conducting reconnaissance along a road, the patrol must select multiple vantage points (OPs). The reconnaissance patrol reconnoiters bridges, defiles (i.e., narrow valley or mountain pass), bends in the road, and urban areas. The reconnaissance element reports the condition, trafficability, and width of the road. Additionally, the unit will determine if there is evidence of enemy activity and gather information on obstacles, bridge and ford locations and conditions, and tunnel or underpass locations and dimensions.

When conducting reconnaissance of a wood line, the patrol will use concealed routes and stealth to reach the wood line and avoid contact. The reconnaissance element determines if there is evidence of enemy activity such as tracks, litter, old fighting positions, mines, booby traps, and obstacles. The patrol will determine if the woods are trafficable. The reconnaissance unit should check all positions from which the enemy could observe and engage friendly forces in open areas.

Force-Oriented Reconnaissance

Force-oriented reconnaissance is focused not on a geographic area but on a specific fighting organization, wherever it may be or go. Force-oriented reconnaissance concerns itself with intelligence information required about a specific enemy or target unit. In this case, the ground reconnaissance element will orient on that specific force, moving when necessary to observe that unit and report all required information as well as any other pertinent observed and collected information. Characteristics of force-oriented reconnaissance include—

- Ground reconnaissance units are generally tasked to determine the location, disposition, and depth of enemy forces.
- The mobility of ground reconnaissance forces assigned to force-oriented missions normally should match or exceed that of the targeted force.
- The commander should place minimal control measures on the reconnoitering unit to ensure its safety while not hindering the execution of its mission.

BRIDGE RECONNAISSANCE

Bridge reconnaissance is not a separate category of ground reconnaissance, but it may be a necessary part of an area, zone, or route reconnaissance. The ground reconnaissance platoon/team follows procedures to ensure that it provides the dimensional data needed to analyze the bridge's structure for repairs, demolition, or military-load classification. Seldom can a ground reconnaissance unit obtain precise measurements. However, if possible, it will report the type and number of vehicles that cross the bridge. Intelligence can then estimate the weight, height, and weight limit of the bridge. For more information on the conduct of bridge reconnaissance refer to MCWP 3-17.4, *Engineer Reconnaissance*.

LEADER'S RECONNAISSANCE

A leader's reconnaissance is not a separate category of reconnaissance, but it will be a necessary part of every reconnaissance mission. The patrol leader plans and reconnoiters all primary and alternate ORPs and OPs. The criteria for selecting these sites are similar, except that the ORP and hide site must be sited to allow for long-range communications, and the OP must allow round-the-clock observation. Rally points and breakout plans must be established and disseminated for all ORPs and OPs.

Leaders evaluate all primary and alternate sites for ORPs/hide sites and OPs based on the following criteria:

- Does the site facilitate communications, to include long-range communications (i.e., HF and/or UHF TACSAT) for ORPs/hide sites?
- Are any suitable communication sites located nearby?
- Does the area provide concealment?
- Are dominant or unusual terrain features located nearby?
- Is the site silhouetted against the skyline or a contrasting background?
- Could personnel be trapped easily in the site?
- Is there a source of water in the area?
- Is the area wet? Does it have adequate drainage, or is it prone to flooding?
- Does the area provide adequate routes of ingress and egress?
- Are roads or trails located nearby?
- Are other natural lines of drift located nearby?
- Do obstacles, such as a ditch, fence, wall, stream, or river, prevent vehicle movement nearby?
- Is the area a place that the enemy would want to occupy?
- Is the site in the normal line of vision of enemy personnel in the area?
- Are any inhabited areas located in the prevailing downwind area?

When establishing an OP, the patrol leader must also consider the following criteria:

- Can the patrol place the designated target(s) under constant and effective observation and within the range of surveillance devices to be used?
- Would the OP have to move if weather and light conditions change?

AMPHIBIOUS RECONNAISSANCE AND UNDERWATER RECONNAISSANCE

Ground reconnaissance support to amphibious operations, to include OMFTS, is broadly similar to other reconnaissance activities. Amphibious reconnaissance and underwater reconnaissance planning present some unique features in terms of command relationships, the relative centralization of ground reconnaissance planning and tasking, the range of insertion and extraction means, and the availability of supporting fires.

The physical environment of the coastal areas in which amphibious operations take place affects the practical conduct of reconnaissance and the kinds of environmental information to be collected. These factors do not alter the fundamentals of ground reconnaissance. Nonetheless, staff officers who are responsible for supporting reconnaissance need to have a fairly detailed appreciation of factors in the littoral environment that affect amphibious reconnaissance and underwater reconnaissance planning and execution. Refer to MCWP 2-1, Intelligence Operations, for a comprehensive doctrinal overview of intelligence and reconnaissance support to amphibious operations and OMFTS.

GROUND RECONNAISSANCE SUPPORT TO AMPHIBIOUS OPERATIONS

In most respects, reconnaissance functions the same way in support of amphibious operations as in others. Significant differences appear in terms of command relationships and centralized control of reconnaissance forces.

Marine Corps reconnaissance forces belong to various echelons of command, from force reconnaissance at the MEF level, through the division, regiment, and battalion levels. Amphibious operations are usually joint operations that will likely involve various other Service reconnaissance assets and SOF. The structure of the reconnaissance group depends on the reconnaissance requirements of the specific operation. For amphibious operations, all available reconnaissance assets are normally controlled at the highest applicable level. Within the amphibious task force (ATF), these are generally controlled at the ATF and landing force levels.

The conduct of amphibious reconnaissance/underwater reconnaissance is complicated not only by the physical conditions under which it is executed, but also by the diversity of forces and levels of command involved in its execution. Command relationships may differ from one operation to another and, therefore, require clear definition in directives issued at the JTF level.

The amphibious force is a task-organized force that consists of a Navy component, ATF, and a landing force component that is structured to conduct an amphibious operation. The ATF may conduct operations as a JTF or as part of a larger joint force. The naval commander, designated as the commander, amphibious task force (CATF), along with the commander, landing force (CLF) are coequals throughout the planning process. Their command relationships will be established by the joint force commander (JFC) in accordance with JP 3-02, Amphibious Operations.

In situations where AFO are planned, an advance force commander is also designated. The advance force commander prepares detailed plans for advance force operations based on the mission and guidance from the CATF and CLF. The advance force will be task-organized to accomplish the assigned mission and often will include landing force ground reconnaissance units and other intelligence forces.

A key issue in amphibious command relationships is the transition between supporting and supported command. Support is a command authority. A support relationship is established between subordinate commanders by a superior commander when one organization should aid, protect, complement, or sustain another force.

The relationship between the CATF and CLF will be established in the initiating directive and may be one of OPCON, tactical control, or support based on considerations of METT-T and the predominance of mission responsibilities. During the planning stage, CATF and CLF will agree to the functions and phases for which one or the other will take responsibility as the supported commander. These arrangements are then confirmed by the establishing authority.

The CATF or CLF might be specified as the supported commander for the entire operation, or the role of supported commander may transition between CATF and CLF for various phases of the

operation. The circumstances under which these transitions take place should be precisely defined and agreed on during the planning phase. During the conduct of an amphibious assault, the predominant command relationship will normally be CLF supported and CATF supporting.

Ground reconnaissance forces normally work directly for the supported commander. Since that designation may change in the course of an amphibious operation, so may the command relationships between the ground reconnaissance commander, the CATF, and the CLF, and the advance force commander. As in any phase of amphibious operations, command relationships not specifically described in JP 3-02 should be clearly defined in directives issued by the CATF level.

In many cases, the organizational concept for amphibious reconnaissance/underwater reconnaissance combines Marine and other reconnaissance forces into a subordinate task group of the advance force. If the reconnaissance group's operations place it in the objective area considerably ahead of the advance force, it may be designated a subordinate task group of the ATF itself. The commander of the reconnaissance group/special staff officer for reconnaissance is normally the senior reconnaissance unit commander present.

GROUND RECONNAISSANCE SUPPORT TO THE AMPHIBIOUS ASSAULT

The amphibious assault follows a well-defined sequence of activities—advance force operations, pre-assault, the assault, and post-assault. Other types of amphibious operations tend more or less to follow this same sequence. Although reconnaissance forces typically play no role in the assault itself, they may still be tasked to serve in some non-reconnaissance capacity, such as battlespace shaping, raids, DAs, control of supporting arms, or ITG. Simultaneous with or even before the assault, reconnaissance forces will be engaged in supporting planned operations.

Advance Force Operations

Advance force operations are conducted in the operational area by a task-organized element of amphibious force, prior to the arrival of the amphibious force in the operational area. These operations are usually performed by the FORECON company, often supported by or supporting various joint intelligence and reconnaissance assets. Examples include landing force assets such as force reconnaissance, reconnaissance battalion, radio reconnaissance and GSPs, as well as ATF assets such as Navy SEAL teams.

In order to answer collection requirements for AFO, the MEF will task subordinate GCE to provide reconnaissance battalion assets in order to augment MEF level ISR plan. Ground reconnaissance support to AFO includes—

- Underwater reconnaissance.
- Amphibious reconnaissance.
- Ground reconnaissance.
- Seizure of supporting positions by conducting specialized limited raids.
- Providing terminal guidance and BDAs in support of offensive air strikes.

Pre-Assault Operations

Reconnaissance of the littoral penetration area, or beaches and LZs, forms an essential element of pre-assault operations. A continuous flow of information on the enemy, terrain, weather, and hydrography will help create a real-time, shared situational awareness at all levels of command.

Reconnaissance during the pre-assault phase will focus initially on the surface and vertical assault landing sites and on the routes and axes of advance that lead to initial objectives to ensure seamless movement from ship to objective. Reconnaissance will determine the size and location of the enemy order of battle, key installations and systems, and will support targeting requirements, including terminal guidance and control of strikes. Reconnaissance platoons/teams inserted and not recovered before D-Day either remain in a secure location or move away from the assault area.

D-Day insertions of ground reconnaissance teams take place during the last period of darkness preceding H-Hour. At this time, ground reconnaissance platoons/teams are usually inserted by minimally detectable means (i.e., parachute, inflatable boat, combatant diving, or combat swimming).

The reconnaissance AOs for ground reconnaissance platoons/teams during D-Day are well inland or to the flanks of the assault beaches. It is critical that these units be clear of the assault beaches or landing points in order not to inhibit the use of supporting arms.

During this phase of the amphibious operation, ground reconnaissance forces are used primarily to detect and rapidly report the movement of enemy reserves toward the assault areas. Planners normally make provisions for ground reconnaissance units to engage these enemy units with supporting fires.

Post-Assault Operations

Reconnaissance units already deployed ashore at the time of the assault will either be recovered or retasked to support follow-on operations. Execution of such post-assault reconnaissance missions can, in practice, come before or be simultaneous with the amphibious assault. Reconnaissance planners should build sustainability into reconnaissance so that reconnaissance forces are able to continuously support any planned follow-on operations ashore after the initial assault.

Initial employment of reconnaissance units is usually on the flanks of the advance inland to detect enemy movement towards the beachhead or landing points. As with reconnaissance units placed ashore before the assault, rapid reporting of such enemy activity is essential.

Other reconnaissance units are usually part of the nonscheduled waves and land as a unit. In situations where an element of the landing force is making a deep penetration by helicopter or by making a separate landing well-removed from the main assault, it may have direct support or attached reconnaissance units.

RECONNAISSANCE PLANNING CONSIDERATIONS FOR AMPHIBIOUS OPERATIONS

Ground reconnaissance platoons/teams involved in reconnaissance support to amphibious operations can expect to receive missions typical of any combat operation; these missions are focused on either the enemy or the environment. The types of information requirements included in the following lists are largely unique to amphibious operations. Actual reporting criteria and formats can be found in MCRP 2-25A.

Reconnaissance Information Collection and Reporting

Underwater Reconnaissance. Underwater reconnaissance is the collection and reporting of information concerning the hydrographic characteristics of a particular area well in advance of an amphibious landing force. It also entails conducting subsurface detailed hydrographic survey in support of all US Navy landing craft and Marine Corps amphibious assault vehicles (AAVs).

Amphibious Reconnaissance/Surveillance. Amphibious reconnaissance/suirveillance is the collection and reporting of information about the activities and resources of an enemy of a particular area well in advance of an amphibious landing force. Ground reconnaissance unit will also conduct initial and/or confirmatory beach reconnaissance as well as conduct ITG of AAVs, tactical boats, amphibious ships, landing craft, or aircraft.

Geospatial Information and Services. Geospatial information and services (GI&S) provides amphibious planners detailed information on hydrography and topography of the AO. Many specific reconnaissance missions are aimed at discovering, clarifying, or confirming such information. Ground reconnaissance units can confirm or supplement the following GI&S products and other support:

- Topographic maps, including city plans.
- Hydrographic maps, including combat charts.
- Aeronautical charts.
- Air target materials.
- Geodetic materials, including positioning databases.

For more information on MAGTF GI&S, see MCWP 2-26, *Geospatial Information and Intelligence*.

Reconnaissance platoons/teams collect and report information to confirm or supplement the previously mentioned GI&S products and other support prior to amphibious operations. The information requirements that need to be satified by the reconnaissance platoons/teams include but are not limited to those listed in table 6-1 on page 6-12.

Table 6-1. Reconnaissance Information Collection Requirements for Amphibious Operations.

Hydrography of the Objective Area		
Tides: General information, range and duration, hourly tide data, meteorological and oceanographic effects		
Sea and swell		
Obstacles, reefs, shoals, bars, and rocks		
Inshore and offshore currents: strength and duration, current table sand charts		
Mean water temperature		
Topography of the Objective Area		
General information: characteristics and landmarks of landing areas, coastal description		
Terrain: KOCOA [key terrain, observation and fields of fire, cover and concealment, obstacles, avenues of approach], vegetation, relief and drainage, trafficability		
Landing Zones		
Designation and location	Navigation aids	Hazards to air operations
Altitude	Obstacles	Obstacles to movement of troops and equipment
Orientation		
Beaches		
Designation and location		
Characteristics: length and width, low- and high-water marks, trafficability, obstacles and interruptions, tides and currents, surf		
Landmarks		
Landmarks are prominent features. For example, the downed tree on the north side of the MSR intersection or the radio twoer that is located adjacent to the DZ.		
Approaches		
Information to be provided includes general information shoreward from the 10-fathom mark and detailed information inside the 3.5 fathom curve.		
Currents	Exits	
Gradient	Distance to inland lines of communication	
Tides		
Ports and Air Facilities		
Ports and Harbors	*Air Facilities and Seaplane Stations*	
Availability of terminal facilities—piers, wharves, storage, and support equipment	Dimensions and characteristics of the runway, runway markings, aprons, dispersal areas, etc.	
Designation, location, and importance	Name and location	
Landing ports within the port.	Navigation aids	
Provisioning	Drainage	
Materials and equipment available for repair and construction	Expandability	
Water supply	Lighting	
Communications	Hangars	
Capacities and related statistics	Workshops	
Quartering facilities	Administration buildings	
	Repair facilities	
	Petroleum, oils and lubricants storage and availability	
	Communications	
	Electric power	
	Water supply	

Maneuver

Insertion by foot or by ground vehicle, the most common means of insertion in sustained operations ashore, is seldom an option in amphibious operations. Amphibious reconnaissance/ underwater reconnaissance, therefore, depends more on specialized reconnaissance forces that are trained in sophisticated insertion and extraction techniques including parachute, helocast, boats, submarines, combatant diving, and combat swimming. This, in turn, increases the necessity for coordination of the essential transportation assets and for inserting and recovery planning. Selection of coastal insertion and extraction locations and times depends heavily on environmental issues, discussed in the "Environment" section.

Ground reconnaissance personnel may be transported to the vicinity of the objective area in ships or aircraft that will not be involved in the landing or recovery of ground reconnaissance platoons/ teams. The transfer of these Marines and their equipment to the delivery vehicle must be considered early in the planning phase. If a particular ship is to be used only for recovery of the ground reconnaissance forces, recovery plans must include the embarkation of supporting Marines on that ship to assist in the recovery and debriefing of the patrols.

Although the requirement for eventual recovery of a patrol always exists, the necessity for physical withdrawal of the patrol from the AO varies. A ground reconnaissance platoon/team may be assigned a surveillance or terminal guidance mission to be executed after its amphibious reconnaissance mission, or the recovery method planned may involve link up with friendly assault forces. In such cases, the withdrawal of the unit is not required.

Supporting Fires

Supporting fires during pre-assault reconnaissance will normally be limited to sea-based and aerial fires until ground-based fire support is firmly established ashore. Close coordination will be necessary to achieve timely, responsive, on-call fires; although substantial delays are likely.

The Environment

Amphibious reconnaissance and underwater reconnaissance occur in the relatively narrow coastal areas of the littorals. The coastal environment is inherently complex and is steadily becoming more so with increasing urbanization. Supporting staffs need a fairly detailed appreciation of factors in the coastal environment that affect amphibious reconnaissance/ underwater reconnaissance planning and execution. In addition to all of the usual intelligence information, ground reconnaissance units will require thorough briefing on the astronomical data, weather, and hydrography in the landing area. Key considerations include: selection of coastal insertion areas, surf, coastal insertion times, coastal extraction areas, and coastal extraction or recovery times.

Selection of Coastal Insertion Areas. Selecting a coastal landing beach usually involves a compromise between a beach that permits easy landing with little security, normally a concave-type beach, and one that provides maximum security at the cost of a difficult or hazardous landing, normally a convex-shaped beach.

Characteristics of an easy landing beach include a wide surf zone and a wide, flat, sandy beach backed by an easily traversable hinterland. Whereas, characteristics of a difficult/hazardous landing beach include a narrow surf zone and a narrow, steep, coarse/rocky beach backed by steep/sharply rising terrain or cliffs.

The predominant factor to be considered when selecting coastal landing beaches is the surf and its effect on swimmers and boats. A meteorologist can predict surf characteristics if sufficient and current hydrographic data is available. If they are not available, they should be requested from HHQ.

Surf. Surf is of two types—surf caused by local winds and surf caused by swells. As swells move toward land, they normally peak when the water depth becomes about one-half the wave length. The wave then becomes unstable due to friction on the bottom until it reaches the point where the water depth is equal to about 1.3 times the wave height. At this point, the crest of the wave breaks over and produces foam associated with breakers in the surf zone.

In general, preferred surf conditions exist when waves break in a single breaker line about 200 feet from the shoreline, with the intervening space containing several foam lines. Such surf conditions are normally characterized by a flat/gentle underwater gradient, spilling breakers, a wide beach, fine soil, and sand with a flat and gently rising or low-hill hinterland.

The least desirable situation may be when several breaker lines exist or when the breakers spill directly on the beach. Such characteristics generally indicate the existence of sandbars and reefs or a steep underwater gradient, narrow surf zone, plunging or surging breakers, a narrow beach, coarse/rocky soil composition, and terrain that rises sharply from the coastline.

The characteristics of the surf in a given day and time are based on the nature of the bottom, the direction and velocity of the wind, the wave length, the state of the tide, and the nature of the currents. These factors, therefore, must be considered when forecasting or observing surf conditions. Other aspects of the operational significance of the surf are as follows:

- Wave height is the vertical distance between a wave crest and the preceding trough; see table 6-2, on page 6-15, for sea states.
- The time period between breakers is considered long if it exceeds 7 seconds. Accordingly, a long wave period is desirable.
- Littoral current is the long shore current or the current that runs generally parallel to the shore. Zero current is the most desirable; otherwise, drift must be planned.
- Surf zone is the area that encompasses the breakers between the shoreline and the outermost breakers (breaker line). The most desirable surf zone is one that is long and has the fewest breakers.
- Offshore shoals, ledges, and rough bottom contours tend to reduce surf.
- Offshore islands tend to break up ocean swells and produce several patterns of smaller waves.
- Kelp or dense seaweed reduces wave height.
- A reef face or other abrupt break in the bottom may cause each wave to break up into smaller waves.
- A submarine ridge perpendicular to the coast increases wave height. Conversely, a submarine canyon reduces wave height.
- A steep beach gradient causes waves to break rapidly and close to or directly on to the beach accompanied by violent wave rush. Such a beach is normally characterized by plunging and

surging breakers, a narrow surf zone, coarse soil/rocks, and terrain that rises sharply behind the shoreline.

- A flat beach gradient causes waves to break gradually (spilling breakers) and at a greater distance from the beach, with several foam lines being formed between the breaker line and the beach. Normally, this produces a wide surf zone, and the beach is composed of fine sand and a gently rising hinterland.
- A sand bar parallel to the beach causes waves to peak or break depending on the depth of the water over the bar. A single breaker line may form over a bar, while another breaker line forms closer to or on the beach. The presence of several bars may cause multiple breakers lines. Sand bars are frequently found off sandy beaches that are exposed to wave action.

Table 6-2. Sea States.

Description	Sea State	Wave Height (Feet)
Calm, Glassy	0	0
Calm, Rippled	1	0–1/3
Smooth, Wavelets	2	1/3–1-2/3
Slight	3	2–4
Moderate	4	4–8
Rough	5	8–13
Very Rough	6	13–20
High	7	20–30
Very High	8	30–45
Phenomenal	9	Over 45

Coastal Insertion Times. The predominant factor to consider in selecting a landing area is the surf. Surf characteristics depend on the nature of the sea bottom and the depth of the water in relation to wave height, but the surf varies with the state of the tide.

A beach with a variable gradient may exhibit the surf characteristics of a steep beach during high tide and those of a flat beach during low tide. Similarly, sand bars that affect the surf during low tide have a reduced effect at high tide. These variable effects may be so pronounced that a beach may be preferred for use as a landing area during one state of the tide and totally unsuitable during the next stage.

Coastal Extraction Areas. The predominant factor considered when selecting coastal withdrawal areas is the surf and its effect on swimmers or boat teams. Surf characteristics for extraction are evaluated in the same manner as for the coastal landing of a patrol.

Coastal Extraction or Recovery Time. As in the selection of landing times, the state of the tide and its effect on the surf must be considered when selecting an exact time for coastal withdrawal. The withdrawal time selected must be early enough to allow completion of recovery at sea before dawn.

RIVERINE OPERATIONS

In areas with limited land transportation and abundant water surface, inland waterways provide natural transportation routes and are logical population centers. In some developing countries, inland waterways are major arteries for economic circulation. River transportation of local products may need military operations to keep waterways open and, in some instances, to transport area produce to maintain the local economy.

Water routes are strategically and tactically important to an insurgent or enemy force, particularly in situations where an external aggressor supports and directs the insurgency. Such a situation dictates a doctrine and strategy of interdiction and control of waterways. Operations involving this doctrine are riverine operations. (For further information on riverine operations, refer to Navy Tactics, Techniques, and Procedures [NTTP] 3-06.1, *Riverine Operations*.)

Concept of Riverine Operations

The riverine area is an inland or delta area comprising of both land and water, characterized by limited land lines of communication with extensive waterways that provide natural routes for transportation and communications. In regions where navigable waterways exist and roads do not or where forces are required to use waterways, an effective program to control the waterways and/or interdict hostile movement becomes paramount. The riverine area requires unique capabilities and tactics to achieve success against hostile forces.

Riverine operations exploit the advantages of the waterways for movement, capitalizing on mobility to find, fix, and destroy hostile forces. Riverine operations are conducted in areas where the local response may range from hostile action to a friendly welcome. There are four types of riverine operations: pre-assault, assault, interdiction, and supporting.

Pre-Assault Riverine Operations. Operations conducted in the riverine area before riverine assault forces arrive are considered pre-assault operations. Examples of such operations include—

- Waterway patrol and interdiction.
- Mine countermeasures.
- Obstruction clearance.
- Swimmer detection and defense.

Assault Riverine Operations. Assault riverine operations employ maritime, ground, air, and/or SOF to achieve one or more of the following goals:

- Establish control of waterways in a geographic area.
- Establish control of land areas, population, and resources.
- Locate and destroy hostile forces, enemy installations, and enemy supplies.
- Establish and secure an area for a combat support base.

Interdiction Riverine Operations. Interdiction riverine operations include waterway interdiction, surveillance, barrier, and security operations. These operations employ ground, maritime, air, and/or SOF to achieve one or more of the following objectives:

- Protect friendly lines of communication.
- Deny hostile forces the use of waterways.
- Collect intelligence information.
- Perform security assistance missions.
- Enforce population and resources control.

Supporting Operations. Examples of supporting operations are as follows:

- Feints or demonstrations intended for purposes of deception.
- Isolation of the AO by interdiction or maritime superiority.
- Operations to assist gaining or maintaining air, ground, or maritime superiority.
- Air, surface, or special operations to secure information.
- Military information support operations and unconventional warfare operations.

Planning Considerations

Riverine operations require detailed planning at all levels and close coordination. Ground reconnaissance units conducting riverine operations must be ready to begin as soon as possible after receiving orders. Boat teams require training in the operation, maintenance, and navigation of their vessels. Plans for riverine operations must be detailed enough to give all participating units complete information. Yet, they must be simple and flexible enough to be modified as the tactical situation changes. The OPORDs for riverine operations are usually developed in the following sequence:

- Scheme of maneuver based on METT-T.
- OPORD based on the scheme of maneuver.
- Water movement plan based on the OPORD and the scheme of maneuver. The water movement plan includes composition of the waterborne force, organization of movement serials, formation(s) to be used, movement routes, C2 measures, mine countermeasures, plans for fire support, and immediate reaction to contact.
- Load plan based on the water movement plan, the OPORD, and the scheme of maneuver.
- Marshalling plan, when required, based on the loading plan, the water movement plan, the OPORD, and the scheme of maneuver.
- Deception plan, when required, based on the mission.

Environmental Considerations

Environmental factors that can affect operations in a riverine environment include—

- Shallow water.
- Large tidal range.

- Swift currents.
- Narrow waterways.
- Natural or manmade obstacles.
- Bridges.
- Lack of suitable areas for ground force maneuver, staging, and/or resupply.
- Concentrations of population whether friendly, hostile, or neutral along the waterways.
- Dense vegetation and, in some cases, essentially impassable riverine terrain.

SURVEILLANCE OPERATIONS

Surveillance is "the systematic observation of aerospace, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means." (JP 1-02) Although many reconnaisance operations are conducted by individual teams, there are times, such as during surveillance operations, when two or more teams are combined.

Some METT-T conditions may require extra personnel and necessitate ground reconnaissance teams to operate together. Two or more teams operating attached to one another are known as a section. These conditions may occur when there is a need to carry large amounts of water, extensive hide site/OP construction materials, etc. The section may remain together for the duration of the operation or it may split up after accomplishing its objective. The advantage of keeping teams together is that the Marines have more security and are better rested when starting actions on the objective.

The METT-T conditions may also allow for the use of an entire ground reconnaissance platoon employed as a tactical patrol. The platoon establishes a patrol base, and then emplaces multiple surveillance sites. The platoon headquarters acts as both the sustainment base and as a quick reaction force (QRF) in case a surveillance site is compromised. This technique has been successfully employed in a desert environment when the objective area is far from any support base and multiple surveillance sites are needed. Sustainment and rotation of surveillance site personnel occurs during hours of limited visibility.

Selection and Occupation of Sites

During ground reconnaissance operations, the patrol leader must select the ORP from which to reconnoiter the hide site and the OP; normally after completing a leader's reconnaissance of the area. While selecting these sites, the patrol leader determines the size of sites to be constructed and the type of breakout drills that will be performed in the event of enemy contact.

The primary mission of the hide site is to facilitate a patrol's internal and long-range communications. The patrol should test their communications from the tentative site before they start to construct their hide. Otherwise, they might have to start over with a new site. On long missions, patrol members can rotate between the OP and the hide site. The hide site is a relatively more secure location because it is further from the objective and designed specifically for hiding.

The primary mission of the OP is observation of the objective and communications with the hide site. To determine if the planned surveillance site will work well for observation, the patrol places all optics at the same levels they will use when they actually occupy the site, such as ground level to ensure that the objective can be seen. Seldom do circumstances allow for rebuilding an OP.

Security

Although the ORP, hide site, and the OP have very different functions, they share the same characteristics:

- When preparing the ORP, hide site, or OP, take precautions to minimize digging signatures such as dust and sound and only construct during periods of limited visibility. Generally, the sites should be camouflaged well enough to escape detection from greater than 10 meters. The sites should blend well with the surrounding terrain in texture and in form. Precautions are taken to reduce reflection that may come from using optics.
- The patrol must maintain all-around security, paying close attention to the most likely avenues of approach. Each site needs all-around observation and a view of anything or anyone in the area. This helps prevent compromise, as it allows the patrol to detect movement and gives them the advantage if they must break out.
- The patrol must prepare and rehearse a complete breakout plan. Patrol members must maintain their equipment packed and ready for executing a breakout drill and have a reliable destruction plan for equipment that must be left in place. Prepositioned M18 claymore anti-personnel mines should be incorporated into the plan to facilitate a quick break out.
- Antennas are the largest signature in any site. They should remain up only when in use and be lowered or removed when not.
- To prevent detection, patrol members must minimize their movement around the sites. Whenever someone does move around the site, they must incorporate countertracking techniques.
- Noise and light discipline must be maintained at all times. Although the sites are well camouflaged, noise and light will easily compromise their locations.

Reporting

Reporting requirements are as follows:

- The patrol will prepare and send reports throughout their mission. The patrol will maintain detailed communications logs, OP logs, photo logs, and patrol logs.
- Communications logs include exact messages sent, exact messages received, and antennas used or tried, their configurations, time(s), and location(s).
- Before any element performs a shift change in the site, all information collected at the site by the outgoing shift is disseminated, to include message traffic, the status of the OP/hide site, and any enemy activity on the objective.
- During periods of activity on the objective, all personnel will be awake and alert to aid in security and recording. The team will maintain detailed OP logs, to include sketches of the objective. The more detailed the information and sketches are, the more successful the mission.

- When the patrol recognizes PIRs, IRs, SIRs, ISR tasks, and RFIs, they will send the information to the hide site from the OP for transmission to the ROC during a scheduled communications window or as FLASH traffic.
- The messages transmitted to the ROC must be complete and well-written to reduce the time needed for corrections or clarification. (Refer to MCRP 2-25A for examples of report formats.)

Link Up and Dissemination of Information

When the patrol has accomplished its mission and has decided to leave the objective, a number of actions must take place. A well-briefed and well-rehearsed plan is paramount for the actions to be completed quickly and efficiently. The plan will outline the routes that the patrol will take, site breakdown procedures, and security during the breakdown process. After the sites are broken down, the patrol will thoroughly sterilize the area to prevent enemy forces from detecting their presence and knowing where to release tracker teams. During link up, the team is at the greatest risk of fratricide. Only one element may move to the linkup location at a time. Communications, night vision devices, and a well-rehearsed plan are critical for a speedy and safe link up. After a successful link up, the team disseminates all of the information that it gained in case they become separated again before extraction.

Contingencies

Due to the uncertainty of military operations, contingencies require plans, rapid response, and special procedures to ensure safety and readiness of personnel and equipment. During the planning process, a patrol must brainstorm for potential contingencies that may arise during their mission and prepare for as many of them as possible. Well understood and rehearsed unit SOPs are the key to contingency preparedness. Examples of contingency planning include:

- Actions on enemy contact during each phase of the operation.
- Break in contact within the patrol.
- Actions taken by the patrol if they become separated during insertion.
- Destruction of equipment plan including prioritization, method, and who is responsible for the action(s).
- Rally or rendezvous plans to cover the patrol during infiltration to, time spent at, and exfiltration from the objective.
- Plans for avoiding all known or suspected enemy forces, danger areas, or civilian concentrations.
- Security during movement, halts, caches, communications, and during hide site and OP construction.
- Spread-loading of mission essential equipment, sensitive items, and construction material if a Marine requires CASEVAC during the patrol.
- No-communications plan covering the patrol's internal communications and external communications to the ROC.
- Linkup plans—both patrol internal and with other friendly forces.

COMBAT ASSESSMENT

Combat assessment is "the determination of the overall effectiveness of force employment during military operations. Combat assessment has three major components: (a) battle damage assessment, (b) munitions effectiveness assessment; and (c) reattack recommendation." (JP 1-02). However, ground reconnaissance units only participate in the BDA component of combat assessment.

Ground reconnaissance patrols are critical sensors for all fire-support platforms. At times, they may be the only available source of targeting information concerning high-value targets. Keys to a successful combat assessment operation are using standardized report formats and sending the best possible information and images of the damage observed to trained analysts for evaluation.

In addition to normal mission planning factors, BDA mission planning factors include:

- Task organization—FACs, JTACs, JFOs, etc.
- Friendly forces marking/identification.
- Position markings.
- Communications equipment, frequencies needed, and authentication codes.
- BDA criteria.
- Special equipment needed such as laser designators and thermal sights as well as training reconnaissance personnel in the use of special equipment.

Definition and Purpose

Battle damage assessment is the timely and accurate estimate of damage resulting from the application of military force, either lethal or nonlethal, against a predetermined objective. This assessment can be applied to the employment of all types of weapon systems—air, ground, naval, and special forces weapons systems—throughout the range of military operations. Primarily an intelligence responsibility with required inputs and coordination from the operators, BDA, in its most basic form, answers four questions:

- Was the target hit?
- What was the extent of physical and functional damage?
- Were the commander's objectives achieved in full, in part, or not at all?
- Should the target be reattacked?

Considerations

When conducting a BDA, the patrol should consider the following:

- *Condition of the Target*. This includes the overall level of destruction or serviceability of the target and whether it was occupied or unoccupied, and whether the enemy was withdrawing or reinforcing after the attack.
- *Casualties*. This includes the number of dead and the number of wounded.

- *Equipment Damage or Serviceability.* This lists destroyed, neutralized, or suppressed vehicles and weapon systems, and identifies which need repair or recovery.
- *Installation Damage or Serviceability.* This identifies damage levels and relative serviceability of runways, roads, buildings, lighting, bridges, power and phone lines, and any repair and damage-control activities.

Reporting Damage Types and Levels

Initial post-strike BDA reports are sent to the ROC for processing and forwarding to the SARCC via the controlling headquarters. The ground reconnaissance patrol is responsible for obtaining and reporting raw data about collateral, physical, and functional damages. As the patrol observes and reports any observed battle damage, they may also be able to report the number and type of dud ordnance and any weapon malfunctions. The patrol reports their BDA observations from the target area using formats found in MCRP 2-25A. The reports should include ground-perspective digital imagery, if available.

The ground reconnaissance patrol reports the extent of physical and functional damage sustained by each target. Physical damage assessments estimate the extent of physical damage resulting from the application of military force, that is, from munitions blast, fragmentation, and the effects of fire. The patrol bases the assessment upon observed or interpreted damage. There are three damage types: collateral, physical, and functional. (For a detailed discussion on the damage assessments for specific targets, see app. G.)

Collateral Damage. The patrol reports any collateral damage that occurs during its BDA mission. Collateral damage is defined as unintentional or incidental damage to facilities or equipment, or casualties, that occur due to military actions directed against a targeted enemy force or facility.

Physical Damage. Assessing physical damage is a judgment call. The key factors are the type and size of the target and the warhead used, and the location of the detonation. The patrol also considers whether the enemy's use of camouflage, concealment, and deception reduced or increased the physical damage, because these factors could distort the assessment.

Functional Damage. The patrol assesses the extent to which military force degraded or destroyed the ability of the targeted facility or objective to perform its intended mission. The level of success is based upon the operational objectives established against the target. Since the assessment of functional damage is subjective, the patrol need not associate a confidence level with it. However, they can include an estimate of the time required for the recuperation or replacement of the target function. For a detailed discussion of functional damage levels, see appendix G.

BATTLESPACE SHAPING

Battlespace shaping operations are conducted by a combat patrol to facilitate the maneuver of friendly forces or to deny the enemy freedom of action. The intent of a combat patrol is to make contact with the enemy, in contrast to a reconnaissance patrol where the intent is to avoid enemy

contact. Ground reconnaissance platoons play a significant role in finding, disrupting, and destroying the enemy by gaining access to areas and terrain typically denied to other forces.

Battlespace Shaping Missions

The ground reconnaissance unit serves as the initial eyes of a long-range targeting asset by providing terminal guidance using appropriate communications, target designation, and organic weapons. Two distinct types of battlespace shaping missions performed by ground reconnaissance units are as follows:

- *Surveillance or Reconnaissance*. When tasked to conduct surveillance or reconnaissance of an area, if a target of opportunity is observed, the ground reconnaissance patrol can engage the target when desired by the commander. Under these circumstances, the patrol often guides munitions or an aircraft onto the target. Additionally, the patrol can engage the target with organic precision weapons.
- *Hunter-Killer Operations*. Ground reconnaissance patrols can conduct prolonged operations in which they operate behind enemy lines or in hostile, safe haven, or semi-permissive environments, employing unorthodox tactics, for the sole purpose of achieving attrition predominantly against the personnel, leadership, or resources of the enemy.

Battlespace shaping is prepared through surveillance, reconnaissance and counterreconnaissance, intelligence preparation, and targeting. These actions enable the commander to shape or exploit each of the enemy's dimensions providing tactical advantage, and assist in the evaluation of enemy capabilities, vulnerabilities, and probable courses of action.

Mission Planning Factors

Route planning and movement are the same for battlespace shaping operations as for a surveillance or reconnaissance mission. Landing zones should be planned close to acquisition points that allow for quick removal from the area. Fire support, particularly artillery and CAS, are imperative for use during target-acquisition missions. Leaders must fully integrate fire support into their plans and understand how fire support can assist or detract from their assigned mission (see table 6-3 on page 6-24). Additionally, patrol members must understand the limitations of their planned fire support.

Ground reconnaissance patrols must ensure that they plan for on-call targets or preplanned 9-Line CAS briefs on infiltration and exfiltration routes, on their intended objectives, and planned LZs. The patrol must also plan for RFAs and NFAs, as needed. Using the patrol's target list and coordination checklists, coordination is done to ensure consideration of the effects of the target types, mission, munitions, effects on local population, rules of engagement (ROE), and the methods of engagement.

Table 6-3. Fire Support Capabilities and Limitations.

Type of Fire Support	Capabilities	Limitations
Indirect-Fire Support	Quick response time	Range
	Adjustability of fire	Naval gunfire availability limited to areas with naval assets
	Variety of munitions, including precision munitions	
	Multiple strike capability	
	All-weather capability	
Close Air Support (Fixed-wing)	Long range	Limited time on target
	Visual target engagement and adjustment of fires	Limited compatibility with patrol radio systems depending on aircraft type
		Limited munitions
		Limited ability to operate in poor weather
Close Air Support (Rotary-wing)	Medium range	Limited munitions
	VHF radio capabilities	Vulnerability to enemy ground fire
	Longer time on target than fixed-wing assets	Limited ability to operate in poor weather
	Visual target engagement and adjustment of fires	

HUNTER-KILLER OPERATIONS

Concepts of Hunter-Killer Operations

For the purposes of hunter-killer operations, an enemy safe haven is an area where hostile forces are able to gather in relative security and in sufficient numbers to engage in activities that include attack preparations, training, fundraising, and recruitment; often conducted in unsecured or ungoverned geographic areas. Hunter-killer operations are combat operations conducted against violent extremist groups operating from sanctuaries in hard to reach areas. The concept of a hunter-killer operation is to aggressively pursue the enemy within their own places of safety, disrupt their operations and sustainment, and neutralize or destroy them.

The usefulness of hunter-killer operations is that they will achieve many results within the objective of denying the enemy space and destroying his will through erosion and exhaustion. Hunter-killer operational utility derives from employing an effective economy-of-force option, achieving persistence by operating in the same space and conditions as the enemy, while achieving a military and psychological impact out of proportion to its size. Hunter-killer teams can be pivotal to irregular warfare operations; however, they could be employed across the range of military operations.

Principles of Hunter-Killer Unit Employment

The guarantee of success in hunter-killer operations is in adhering to the following principles of employment:

- The use of small units as a purpose-built organization.
- Knowledge of the terrain.
- Unconventional and audacious leadership.
- Increased mobility with the use of vehicles and helicopters.
- Wide latitude to conduct independent operations.
- Modern resupply methods and a logistic system to support the unit.
- Overmatch in firepower, with the inclusion of CAS assets, to compensate for the unit's lack of heavy weapons.
- A supportive QRF to reinforce beleaguered units or exploit opportunities.

Additional principles of employment are discussed in the following subparagraphs.

Environment. Hunter-killer units are best employed in irregular warfare environments where the adversary consists of insurgent forces of sufficient size to field a guerilla action arm, a supporting auxiliary, and a perceived safe haven for sanctuary that the adversary believes to be free of friendly forces. The ground commander has made the conscious decision to conduct territorial offense type operations for achieving desired counter safe haven effects.

Command and Control. Hunter-killer operations require independent maneuver in enemy territory. However, measures to deconflict fratricide issues are paramount when there are ongoing friendly operations. Graphic control measures, such as reconnaissance AOs and Blue Force Tracker technology, will assist in limiting fratricide.

Command and control is flattened and decentralized to the commander of the hunter-killer force. As an operating concept, hunter-killer forces should be under the OPCON of a command element and reporting directly to the commanding officer. Unique passage-of-lines techniques are required. Tailored ROEs should be considered to give the hunter-killer force the widest latitude to take on enemy forces. Consideration should be given to the creation of free-fire zones in order to increase the flexibility of the hunter-killer force.

Composition of the Hunter-Killer Force. Hunter-killer forces should not be formed ad hoc; standing specialized forces with the inherent characteristics for conducting hunter-killer operations are requisite for success in the irregular warfare environment.

Hunter-killer organizations will be one of nontraditional organization and task-organized based on the context of the insurgency and irregular warfare environment. Care should be taken to ensure the higher command supports and sponsors its nontraditional employment. Hunter-killer units should not be organized as commando or raiding forces.

Individuals chosen to man hunter-killer units should be specially selected, self-reliant, and capable of adaptation to the environment and the enemy's tactics and style. They must be independent in

thinking, masters of ambush, and have a psychological make-up for operations that can be ruthless and lethal. Due to the high endurance operations, the force must be in superior physical shape and be skilled in living off of the land.

As an operating concept, hunter-killer forces should be formed from a ground reconnaissance platoon as a base for the unit with added enablers that have been screened specifically to work with the platoon. These enablers could include radio reconnaissance Marines, human exploitation teams and/or explosive ordnance disposal technicians.

Leadership. Leadership above the hunter-killer organization's level of command must be highly supportive to ensure the survivability of the unit. Specialized units enjoying a limited amount of control, wide latitude for independent operations, and a high freedom of maneuver often risk the ire of traditional, formal militaries; they are often perceived as outliers with a lack of discipline.

For this reason, the leadership within the hunter-killer unit must be chosen for their vast knowledge of unconventional operations, audacity, and the ability to be independent and decisive. Leaders must be proven as capable of conducting innovative and nonconventional tactics. Successful leaders of hunter-killer operations have tended to be highly charismatic and aggressive.

Specialized Training. Hunter-killer units require specialized training in enemy tactics and weaponry, long-range endurance operations, infiltration and exfiltration techniques, and combat techniques most useful to the irregular warfare fight.

All training will be conducted under realistic conditions that the hunter-killer unit may encounter. Advanced training in subversion and sabotage techniques, along with how to conduct military information support measures are required. As these are extended operations, sufficient cross training of combat skills is required to maximize the skill sets of each person as personnel replacement opportunities may be limited.

Mobility. The hunter-killer force requires equal or superior maneuverability and mobility to the enemy in order to succeed. The force will require speed to outmaneuver the enemy in his territory and, if required, speed to escape and counter enemy attempts to destroy the hunter-killer force.

The highly preferred method is to mount the force in all-terrain vehicles (ATVs) that allow for increased range, can carry sufficient supplies for long duration, and provide platforms for additional firepower. Aviation mobility is a key hunter-killer enabler and consideration should be given to a direct support relationship between aviation units and the hunter-killer unit for matters such as transport, resupply, CASEVAC, and liaison.

Firepower. Along with organic firepower and the necessary overmatch to any known enemy capability, the hunter-killer unit will require the integration of reinforcing fires if the effects of combat with the enemy begin to severely endanger or attrite the hunter-killer force.

Long-range artillery, CAS, or fires from persistent, armed unmanned aerial vehicle or UAS platforms are programmed as part of the hunter-killer operation. Larger QRFs, notably with a raiding capability, form part of the backup or can reinforce escalation of force as needed during planned hunter-killer operations.

Technology Enablement. Hunter-killer units should be provided the latest in technology to improve their combat performance, endurance, and force protection. Hunter-killer doctrine for employment should change as technology changes to maintain the effectiveness of the find-fix-destroy combat template. This will require an equipping process to take advantage of rapidly emerging technologies. Additionally, hunter-killer forces should be equipped with the latest sensor/countersensor capabilities to expand their operational reach or allow them to conduct economy-of-force operations.

Intelligence. Hunter-killer operations will require an unusually high amount of intelligence on the enemy and the geography of the operating area. Dedicated platforms and intelligence support, combined with the intelligence-gathering capacity of the hunter-killer operation, can help achieve intelligence dominance within enemy safe havens.

Sustainment. Hunter-killer operations must be capable of tailored long-range, long-duration missions, often outside the scope of friendly lines of communication. Limitations on combat service support must be factored into the planning. In earlier periods of irregular warfare, this involved knowledge of living off of the land and having the ability to be self-sustaining (foraging or capturing enemy supplies).

While these efforts are still viable, technology-enabled hunter-killer teams equipped with mobility platforms will require a logistics system to support uniquely American gear if the force is not totally equipped to look like the enemy. Air support is the most important resupply capability for hunter-killer operations, whether it comes from manned or unmanned aerial resupply vehicles.

URBAN TERRAIN OPERATIONS

The ground reconnaissance unit can be very effective in an urban environment. Their ability to gather information and report timely on the current situation is vital to the intelligence collection plan. The ground reconnaissance unit can help in three ways during an urban operation. First, commanders can use ground reconnaissance platoons extensively and effectively for surveillance. Second, they can be used on a limited basis for reconnaissance. Third, they can be employed to conduct specialized limited scale raids (see paragraph “Specialized Limited Scale Raids and Other Offensive Operations”).

Before committing a ground reconnaissance platoon to a mission in urban terrain, all aspects of the mission and the environment must be considered. Specifically, the commander must consider the difference between reconnaissance support to offensive, defensive, other tactical operations, stability and contingency operations.

Surveillance Operations

This is normally the primary mission a ground reconnaissance unit conducts in an urban environment. Ground reconnaissance platoons are most often used to report information received along main supply routes to and from the urban environment. Depending on the size of the urban

area and location of key buildings, the ground reconnaissance unit might report information on specific buildings, motor pools, etc.

During other tactical operations, stability, or contingency operations, a ground reconnaissance platoon might surveil a specific target from inside the environment. Considerations for surveillance in urban terrain include camouflage, observation, security, and protection and sustainment support.

Camouflage. Ground reconnaissance platoons are proficient in camouflage techniques specific to urban environments, such as window screening and false walls.

Observation. In built-up areas, windows provide readily accessible observation ports. However, care should be taken to prevent optics from protruding beyond the window as this is an obvious sign of a surveillance position. At all times, care must be taken to avoid allowing light to reflect off of the optics. Patrol members must position themselves as far back in the room as possible to keep from being seen. To lower their silhouettes, they can support their positions with a table or sand bags.

Security. From the time the patrol leaves the last secure point until exfiltration, security remains a constant and immediate concern. The patrol must plan for and maintain constant, sustained security for every phase of their operation. In the security role, the patrol can use both active and passive security devices, staging the devices in and around the site to identify any presence whether friendly, enemy, or civilian. However, these security devices must be able to withstand scrutiny.

Protection and Sustainment Support. In an urban area, the ground reconnaissance patrol can achieve protection and sustainment in stay-behind missions.

Reconnaissance Operations

This is the second mission that a ground reconnaissance platoon can perform in an urban environment. Due to the increased chance of compromise in an urban environment, the commander should consider employing ground reconnaissance units in a very limited reconnaissance role.

The ground reconnaissance unit plans reconnaissance missions in urban terrain in as much detail as possible. The ground reconnaissance unit plans urban reconnaissance missions using METT-T, with particular focus on the type of mission, planning time, and the specialized equipment needed with particular attention to the weight and size of the equipment.

URBAN TERRAIN PLANNING CONSIDERATIONS

Within built up areas, urban terrain will differ based on size, location, and history. Weather, smoke, and dust will routinely obscure visibility. Military operations can change urban terrain, shifting shadows and dead spaces around every time a building collapses or a new pile of rubble

forms. When operating in an urban environment, it is imperative that ground reconnaissance patrols receive a detailed briefing on the ROE, to include sniper engagement criteria and use of supporting arms.

Industrial Areas and Residential Sprawl

Urban areas consist of two types of terrain: industrial areas and residential sprawl. Industrial areas usually have low (one to three stories) flat-roofed buildings. Most of these are factories or warehouses, and are generally located on or near major rail and highway routes. Residential areas have some houses or small dwellings with yards, gardens, trees, and fences. Streets normally form rectangular or curving patterns. Both types of terrain have many open areas. Within these two types of terrain, are three subareas consisting of—

- *Core Periphery.* A core periphery has narrow streets (12- to 20-meters wide) and continuous fronts of brick- and heavy-walled-concrete buildings. Most buildings are of similar height, ranging between 2 and 3 stories in small towns and 5 to 10 stories in large cities.
- *City Cores and Outlying High-Rise Areas*. Typical city cores mostly consist of high-rise buildings that can vary greatly in height. More modern buildings often have more space between them than the buildings in older city cores. This open construction style is more prevalent in outlying high-rise areas than in city cores. Streets generally form rectangular patterns.
- *Commercial Ribbons*. These rows of stores, shops, and miscellaneous structures are built on either side of the major (at least 35-meters wide) streets that run through built-up areas. These structures are uniformly two to three stories tall.

Methods of Maneuver

Leaders must consider the distance of the insertion or extraction, and the training of all patrol members. They consider their own experience as well as internal and external assets. All types of insertion and extraction means available are still viable in an urban environment; however, considerations for their use may be different. For example, the use of nonstandard tactical vehicles may be a good insertion and extraction platform in urban areas during operations. Subterranean corridors to include sewers, subways, underground tunnels, or drainage systems can be used with great effectiveness.

KOCOA Evaluation

When a ground reconnaissance unit evaluates operating within urban terrain, it considers the following factors:

- *Key Terrain*. "Is any locality, or area, the seizure or retention of which affords a marked advantage to either combatant." (JP 1-02) Within an urban environment, key terrain may include, but is not limited to, high points of observation from buildings, key intersections and roads, water points, electric plants, and cell phone towers.
- *Observation and Fields of Fire*. Buildings on the edge of a city generally offer better observation and fields of fire than those inside. Tall buildings with numerous windows offer the best observation, especially if the buildings have spaces between them.
- *Cover and Concealment*. Buildings with brick walls and a few narrow windows balance cover and concealment. Roofs provide little protection; lower floors offer better protection than do

areas directly under the roof. Additionally, floor layouts with many small rooms offer more protection than layouts with larger rooms.

- *Obstacles*. Doors and fire barriers are common in commercial buildings and become obstacles when closed or secured. Furniture and appliances can also become obstacles.
- *Avenues of Approach*. The best way to enter a building is from the top. Therefore, the most important avenue of approach is one that quickly leads to the top from fire escapes, drainpipes, or adjacent buildings.

Intercity Distribution of Building Types

Leaders can generally determine the layout of a city by the distribution of the buildings within the city.

In built-up areas, mass-construction buildings (modern apartments and hotels) are the most common structures. They comprise two-thirds of the total area, and they are usually constructed of brick. Steel and concrete-framed multistory buildings comprise the city's core area, its most valuable land. As centers of economic and political power, they have potentially great military significance.

Open spaces, such as parks, athletic fields, and golf courses, comprise about 15 percent of the average city's area. Most of this 15 percent is suitable for air assault or airborne operations. However, approaches to these areas may have obstacles such as tall buildings, trees, and wires and should be carefully considered during planning. Additionally, rooftops complement this 15 percent since many can take the weight of aircraft or the impact of men and equipment jumping onto them.

Sources of Information About the Urban Area

A variety of locally available sources can provide a wealth of information regarding an urban area. These publically available sources include large-scale city maps, diagrams of support systems (e.g., underground sewer, utility, transport), rosters of key personnel and key public buildings.

In addition to locally derived information, US Government studies and databases can provide detailed information on—

- Size and density of the population.
- Police, security, and firefighting capabilities.
- Civil defense and air-raid shelters.
- Utility systems.
- Medical facilities.
- Mass-communication facilities.

Useful Individual Equipment in an Urban Environment

Some of the items that individual patrol members should carry in an urban environment include—

- Camera, video camera, tape recorder.
- Spotting scope with stand and/or binoculars.
- Communications equipment with various antennas.

- Dark cloth, tape, glass cutter, multipurpose knife, saw, crowbar, bungee cords.
- Pens, pencils, permanent markers, notebooks.
- Wasp and hornet spray.

Communications

Probably the most important consideration in planning for an urban environment is communications. Primary communications concerns are the type of antenna to use and placement of that antenna. Of note, never construct antennas less than twice their length from active power lines and transformers.

As normally used in other environments, a ground reconnaissance patrol may have a split hide site and OP in an urban environment with the hide site located outside of the urban area and the OP within it. When the sites are split, the patrol may have to use several different methods to establish LOS communications and should be prepared with alternate and tertiary LOS antennas.

The best case scenario occurs when the patrol members at the hide site are able to use their HF, UHF TACSAT, and LOS systems normally. However, if the OP is located subsurface within the urban area, they will need an antenna for LOS communications with the hide site. Depending on the situation, the patrol members at the OP might be able to use the whip antenna that is normally issued with their inter-team radio. Another option for the patrol is to use remoting equipment to communicate with the hide site.

If the entire patrol is located together in a combined hide site and OP that is subsurface, the patrol will have to remote the long-range antenna system to the surface to establish communications with the ROC. Operating from a subsurface station is risky because the enemy may be able to detect the patrol's antenna(s).

To make contact with the ROC using HF, the patrol may try attaching the HF antenna wire to a nearby metallic object that protrudes above the surface such as a light, a fence, or a storm drain gate. The patrol must remember to place the antenna system towards the receiving station. To make contact with the ROC using UHF TACSAT, the patrol must ensure that the antenna is placed so that nothing obstructs its view with the satellite.

Communications are easier to achieve from an elevated position, such as a building or other structure. In some cases, distance dependent, the ground reconnaissance patrol may be able to use the whip antennas organic to their radio systems to establish communications with the ROC.

Ground reconnaissance patrols need to be prepared to construct field expedient antennas to achieve communications in an urban environment. Imagination on construction and placement of antennas will be useful in gaining positive communications. Items that can be used for HF communications include—

- Existing antennas on the structure.
- Existing electrical wiring; patrol must test for conductivity.
- Metal plumbing pipes.
- Ceiling grids.

- Metal clothes lines.
- Metal building frames; power to the building must be off, otherwise damage to the radio will occur.

URBAN TERRAIN HIDE SITES AND OBSERVATION POSTS

When selecting a suitable site location, Marines tend to go for height. In an urban operation, this can be a mistake. The greater the height attained, the more the reconnaissance Marine has to look out over an area and away from his immediate surroundings. For example, to see the road below a tenth-floor OP, the Marine must lean out of the window, which reveals his position and exposes him to enemy fire.

Though the observer cannot predict where incidents will occur, he can expect that the ranges will be relatively short distances. An OP site must cover its surroundings as well as middle and far distances. In urban areas, this is rarely possible; sites are often forced off-ground levels by passing pedestrians. However, in general, the patrol should avoid going above the second floor.

Considerations

When considering possible hide sites or OPs, buildings that provide protection from the weather and enemy small arms fire are preferred. However, isolated buildings should be avoided as they are an obvious choice for an OP or hide site. The patrol should consider old, derelict buildings as they are unlikely to be re-occupied by civilians in the area. Abandoned or unoccupied houses also offer good sites, but could be booby trapped or be re-occupied by civilians.

After carefully observing the inhabitants' daily routines, the patrol can occupy a private residence. The patrol can establish their hide site or OP in the basement, attic, or both. The homeowner(s) should be considered a threat and, as always, the patrol should limit their occupation of the site to no more than 24 hours. Shops with empty accommodations on the upper floors are also a good choice, but occupation time should be limited to no more than 24 hours.

Once a site has been selected, it must be searched and cleared before the patrol begins to construct its hide site or OP.

Construction

During the planning phase, the patrol plans the construction of an urban hide site or OP in detail. The patrol must rehearse construction and occupation of the site numerous times, day and night. Once the patrol has occupied their intended hide site/OP location and before construction begins, the patrol must record what the area looks like so that they can return it to normal before departing. When construction begins, the patrol must ensure that local security is posted to warn of any excess noise and as an early warning. They must prepare a view aperture, a viewing platform (if needed), and the interior layout. Selection of the viewing aperture takes priority over the construction of the viewing platform or any interior work.

Camouflage

To survive in an urban environment, reconnaissance Marines must supplement cover and concealment with camouflage. The patrol should evaluate the camouflage they need for each location separately by studying the terrain in the surrounding area. The site must blend in with the terrain. For instance, in an undamaged building, they should not make a loop hole for observation. They should use only materials that they need as excess materials can reveal their position. The patrol should consider the following when constructing their hide site/OP:

- *Shadows*. Buildings in urban areas produce sharp shadows.
- *Color and Texture*. The patrol needs to break up the silhouettes of their individual equipment. They can use burlap or canvas strips for this. The predominant colors are normally brown, tan, and gray.
- *Basic Principles of Patrolling*. The basic principles and techniques of patrolling remain the same in the urban environment as in any other environment for movement, camouflage, and noise and light discipline.

SPECIALIZED LIMITED SCALE RAIDS AND OTHER OFFENSIVE OPERATIONS

A specialized limited scale raid is the conduct of a small scale attack through the swift penetration of hostile territory to secure information, to confuse the enemy, to destroy his installations, or for a specific purpose other than seizing and holding terrain. It ends with a planned withdrawal back to friendly territory upon completion of the assigned mission. For a detailed discussion concerning specialized limited scale raids, refer to MCWP 3-43.1, *Raid Operations*.

Specialized raid operations allow the commander to gain access to the environment and to maneuver rapidly to achieve tactical surprise and mass his forces, regardless of terrain obstacles. The unique versatility, strength, speed, and agility of a specialized raid force allows it to rapidly maneuver against the raid target and quickly withdraw from the objective area. Organization of this element is determined by the mission, size and type of enemy force, enemy mobility, terrain, and avenues of approach. Qualities over quantity, as well as capability, are the keys to determine force size.

Utilization of specialized surface, subsurface, and airborne insertion/extraction methods by the raid force includes—

- Swim operations (clandestine landing and withdrawal via surface swimmers).
- Boat operations (OTH, surface vessel deployment, and clandestine landing and withdrawal).
- HRST (rappel, fast rope, helicopter insert and extract, and SPIE).
- Combatant dive operations (closed-circuit, open-circuit, and diver propulsion devices [DPD]).
- Parachute operations (static line, MFF, HALO, HAHO, and TORDS).
- Submarine operations (insert/extract via submarine).

Capabilities

Only the well-trained raid force can be expected to meet the demands of specialized raid operations. Reconnaissance units are capable of the following:

- Particularly proficient in night operations, obstacle recognition and breaching, communications, close quarter battle, precision marksmanship, target discrimination, controlling of fire support assets, extended duration field medical care, and intelligence collection.
- Highly skilled in gaining access to denied terrain or areas of operations through stealth, amphibious training, swimming, helicopterborne operations, hand-to-hand combat, SERE training, small boat handling, demolitions, use of enemy weapons and equipment, cliff-scaling techniques, and operation of special equipment and arms such as laser designators and sniper rifles.
- Capable of conducting sensitive site exploitation and collecting intelligence on the objective without the addition of enablers to the raid force.
- Routinely conduct training that extends to periods when personnel are subjected to extreme mental and physical strain. This frequent training develops physical endurance, making these Marines uniquely qualified to accomplish a mission calling for the utmost in physical stamina.
- Able to easily task-organize to become a raid force. Reconnaissance Marines possess experience and special skills that can be immeasurable for accomplishment of the mission and/or specific tasks. Cross-training of all personnel is maximized. This is critical in reducing the size of the raid force, while still ensuring the force can execute contingency plans and successfully complete the mission if casualties are sustained.
- Rigorous and thorough training develops special skills in stealth and mobility that allow the force to quickly break contact and move undetected; even if initiated under pressure. The execution of this critical event (particularly during a withdrawal at night) is required to conduct successful raids.

Limitations

Although reconnaissance units are capable of conducting a wide array of raid operations, careful considerations must be taken when selecting them as the force of choice. The following limitations should be considered when employing reconnaissance Marines as a raid force:

- Units are not designed to readily absorb casualties. The specialized skills found within reconnaissance units cannot be rapidly replaced utilizing general combat replacements.
- Company and platoon headquarters require a C2 and intelligence enabling package to adequately command and control complex and/or reinforced raids.
- Organic fire power is limited to direct fire and crew-served weapons. Units must be augmented with mortar and rocket systems if additional firepower is required.
- Unit size prevents the ability to provide a robust reserve for the execution of contingency plans or to exploit unforeseen opportunities. Units rely upon other GCE assets to provide a QRF.

These limitations to the raid force are mitigated through the rigorous assessment and selection of reconnaissance forces and the capabilities certification process during the predeployment training program cycle.

SPECIAL MISSIONS

Ground reconnaissance units are routinely called on to undertake high-risk/high-value missions that require their unique access and maneuver skills. Some of these missions are pathfinder operations, sniper operations, and various stability and contingency operations.

Pathfinder Operations

Pathfinders provide navigational aid and air traffic advisories for military aircraft. Pathfinder operations can occur at any phase of an air assault or a ground operation that requires sustained support by aircraft. Additionally, pathfinders can provide advice and limited aid to units planning an air assault or airdrop operations.

Ground reconnaissance units are sometimes tasked to perform limited pathfinder duties. This capability is limited by the platoon's path-finding experience and number of qualified pathfinder Marines. Further information on pathfinder operations, including capabilities of ground reconnaissance platoons with properly qualified pathfinder personnel, can be found in FM 3-21.38, *Pathfinder Operations*.

Sniper Operations

The Marine scout sniper is "highly skilled in fieldcraft and marksmanship, delivering long range, precision fire at selected targets from concealed positions. . . . Selected targets are those that have a definite influence on the outcome of the battle and the enemy's ability to fight." This capability is limited by the platoon's sniping experience and number of qualified snipers. For more information concerning sniper operations, refer to MCWP 3-15.3, *Sniping*.

With properly qualified sniper personnel, the capabilities of ground reconnaissance platoons to support sniping operations include battlespace shaping through precision fire, countersniper operations, and technical assistance in planning for and employing snipers.

Stability and Contingency Operations

Ground reconnaissance units are well suited to conduct stability and contingency operations, because they can provide both overt and clandestine combat information. Both of these are critical to success in stability and contingency operations.

Stability and contingency operations occur unilaterally, or with offensive and defensive operations. Marine Corps forces can participate in stability and contingency operations while a HN is involved in combat operations. Additionally, stability and contingency operations can escalate into combat operations, and leaders need to be prepared in case this occurs.

Stability and contingency operations influence the political, civil, and military environments, and can disrupt illegal activities. These operations are characterized by indirectness rather than directness. Planning factors for stability and contingency operations include detailed intelligence, ROE, OPSEC, demography of the host nation, deception, and COMSEC.

Arms Control. This contingency operation is associated with weapons of mass destruction. Ground reconnaissance activities in support of arms control include reconnaissance or surveillance of ammunition holding areas, motor pools, storage facilities, suspected transshipment sites, suspected or known weapons caches, as well as CBRN monitoring.

Combating Terrorism. Terrorism is defined as "the unlawful use of violence or threat of violence to instill fear and coerce governments or societies. Terrorism is often motivated by religious, political, or other ideological beliefs and committed in the pursuit of goals that are usually political." (JP 3-07.2, *Antiterrorism*). Terrorism is categorized three ways—non-state supported, state-supported, and state-directed—based on where its control and support originates.

Methods used to combat terrorism include antiterrorism, which are defensive measures, and counterterrorism, which are offensive measures.

Antiterrorism. JP 1-02 defines this as "defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, to include rapid containment by local military and civilian forces." Typical antiterrorism actions include—

- Crime prevention and physical security actions that prevent theft of weapons, munitions, identification cards, and other materials.
- Physical security actions designed to prevent unauthorized access or approach to facilities.
- Positioning and hardening of facilities.
- Coordination with local law enforcement.
- Policies regarding travel, size of convoys, breaking of routines, HN interaction, and off-duty restrictions.
- Protection from weapons of mass destruction.

Counterterrorism. JP 1-02 defines this as "actions taken directly against terrorist networks and indirectly to influence and render global and regional environments inhospitable to terrorist networks." Specially organized and trained counterterrorism units usually conduct counterterrorism operations. In some cases, conventional forces provide, at most, limited support. Ground reconnaissance activities that support combating terrorism include—

- Reconnaissance or surveillance to confirm terrorist activity.
- Surveillance of a terrorist safe house.
- Surveillance of suspected or known terrorists.
- Force-protection surveillance.
- Conducting of raids or DA.

Foreign Humanitarian Assistance. Foreign humanitarian assistance programs are conducted to relieve or reduce the results of natural or manmade disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property.

Foreign humanitarian assistance provided by US Forces is limited in scope and duration. The assistance provided is designed to supplement or complement the efforts of the HN civil authorities or agencies that may have the primary responsibility for providing humanitarian assistance. Ground reconnaissance activities supporting foreign humanitarian assistance operations include—

- Providing search and rescue (tracking) support.
- Long-range communications support.
- Damage assessment.
- Identifying and establishing beach landing sites (BLS), helicopter LZs, and DZs for the delivery of relief supplies.
- Route reconnaissance.

Noncombatant Evacuation Operations. Noncombatant evacuation operations relocate threatened civilian noncombatants to secure areas. Normally, these operations remove US citizens from foreign nations where their lives are in danger either from the threat of hostilities or from a natural disaster. In addition to US citizens, relocated civilians can include selected HN citizens and third-country nationals. The three basic environments in which noncombatant evacuation operations (NEOs) occur are permissive, uncertain, and hostile.

Permissive. A permissive environment has no apparent physical threat and no HN opposition. Military assistance is normally limited to agency support. This operation (NEO in a permissive environment) is slow and deliberate. It is the least likely environment in which a NEO might occur.

Uncertain. An uncertain environment requires the commander to disseminate the ROE early. The HN may or may not be in control, but cannot ensure safety. An uncertain environment increases the need for a reaction force.

Hostile. A hostile environment might require a large security element and a large reaction force. The ROEs must be strictly enforced. The HN or other threat will probably oppose evacuation.

Ground reconnaissance activities in support of a NEO include—

- Reconnaissance or surveillance for HN and US Forces.
- Early warning for HN and US Forces.
- Personnel recovery and CSAR support.
- Perimeter security.
- Route reconnaissance.
- Conduct raids or DA.
- Tactical recovery of aircraft and personnel (TRAP).

Peace Operations. Peace operations are focused on supporting strategic and policy objectives, as well as the diplomatic activities that implement them. Peace operations include peacekeeping operations, peace enforcement operations, and support to diplomatic efforts to establish and maintain peace.

Peace operations monitor and ease the implementation of agreements, such as a cease fire or truce. They can also support diplomatic efforts to reach a long-term political settlement. These operations usually consist of observing, monitoring, or supervising, as well as aiding the parties involved in the dispute. The mission of a peace operation is fluid, and is based on a review of METT-T. Ground reconnaissance activities supporting peace operations include reconnaissance or surveillance of a demilitarized zone, confrontation areas, cease-fire areas, refugee camps, and smuggling routes; conducting damage assessments; and monitoring CBRN facilities.

Security Assistance. Security assistance is a group of programs by which the United States "provides defense articles, military training, and other defense-related services to foreign nations by grant, loan, credit, or cash sales in furtherance of national policies and objectives." (JP 3-07, Stability Operations)

Marine Corps forces support and participate in security assistance efforts by training, advising, and assisting allied and friendly armed forces. Ground reconnaissance activities supporting security assistance operations include providing training and advisory services in their normal areas of expertise.

Show of Force. A show of force is a mission carried out to demonstrate resolve. Units conducting a show of force must deploy rapidly due to the political need for timely action. As the word "show" implies, media coverage is desirable and must be planned. Commanders must prepare in case a show of force evolves into a combat operation.

A show of force bolsters and reassures allies, deters potential aggressors, and increases regional influences. A show of force also defuses a situation that could damage US interests or national objectives and lends credibility to US commitments and increases regional influence. This type of mission can take the form of a combined training exercise, rehearsal, forward deployment of military forces, or introduction and buildup of military forces in a region.

Ground reconnaissance activities in support of a show of force include participation in airborne operations and amphibious demonstrations, surveillance from fixed OPs, and route reconnaissance.

Support to Counterdrug Operations. Military efforts support law enforcement agencies, other US agencies, state governments, and foreign governments. The goal of counterdrug operations is to stop the flow of illegal drugs at the source, in transit, and during distribution. The Department of Defense (DOD) may contribute in the following manner:

- DOD may provide training, assistance, equipment, and facilities as long as doing so does not affect US military readiness.
- Title 10, United States Code, Sections 371-378, gives military forces the authority to assist civilian law enforcement agencies. However, such authority is restricted by the Posse Comitatus Act (Title 18, United States Code, Section 1385) and corresponding DOD and Department of Navy regulations, which limits the use of the federal military personnel to act in a civilian law enforcement capacity. For example, unless permitted by statute, Marine Corps personnel may not search or arrest US civilians or conduct any related law-enforcing activity involving

US civilians. DOD may pass information collected during normal operations to law enforcement agencies.

- Military efforts support and complement, not replace, the counterdrug efforts of other entities. These entities may include US agencies, states, and cooperating foreign governments. The Marine Corps can support any or all phases of a combined and synchronized effort to attack the flow of illegal drugs at the source, in transit, and during distribution.

In counterdrug operations, ground reconnaissance units normally support law enforcement agencies. Ground reconnaissance activities supporting counterdrug operations include reconnaissance or surveillance of shipment facilities, shipment routes, and marijuana, cocoa, and poppy fields. Counterdrug operations also include surveillance of narcotics traffickers, air and vehicle traffic, and other tasks as directed.

Support to Insurgency. An insurgency is an organized movement aimed at the overthrow of a constituted government through the use of subversion and armed conflict. At the direction of the National Command Authority, US military forces may assist insurgents or counterinsurgents.

The United States supports selected insurgencies that oppose oppressive regimes who work against US interests. Major considerations include the feasibility of effective support and the compatibility of US and insurgent interests. Since support for insurgencies is often covert, SOF are frequently involved. Leaders may call upon conventional forces when needed. That is, when the situation requires their particular specialties or when the scope of operations is so vast that conventional forces are required.

Ground reconnaissance activities in support of an insurgency or COIN include early warning for US and HN forces; reconnaissance of lines of communication; surveillance of refugee camps; reconnaissance or surveillance of targets for future DA; training of insurgent forces in their normal areas of expertise; and conducting raids or DAs.

CHAPTER 7
METHODS OF MANEUVER

Specialized forms of maneuver are major aspects of ground reconnaissance employment, with implications for supporting units, OPSEC, scheduling, and ultimately mission accomplishment. The method chosen will depend on factors of METT-T and consideration of support across the warfighting functions. The insertion and extraction means discussed are categorized by the basic means of transport: surface, air, or amphibious. More than one means is often used to execute a single mission. For example, a ground reconnaissance platoon might insert via a parachute drop and infiltrate the objective area by foot patrol or insert via a submarine followed by a surface swim and then infiltrate the objective area by foot patrol.

Insertion and extraction methods should not be thought of as simply a means to get to and from work. This limited thinking will severely detract from the full potential and effects that can be achieved from these special skill sets. Instead, these special skills should be thought of as a means to access the operational area— parachute drops, combatant diving operations, and SPIE are means to maneuver forces around the battlefield. These methods of maneuver allow friendly forces to instantly access and, when supported with resupply, to persist in terrain that previously would have been off limits or otherwise degrade a unit's combat effectiveness. Additionally, these forms of maneuver reduce the risk of compromise while maintaining the advantages of surprise and mobility.

SURFACE WATERBORNE OPERATIONS

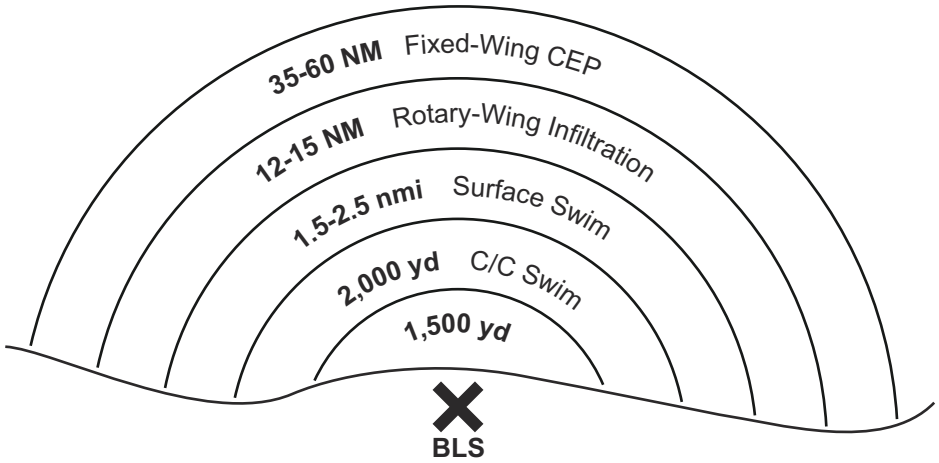
More than five-eighths of the Earth's surface is covered by water. Ground reconnaissance units conduct waterborne operations to infiltrate or exfiltrate from a designated target area using these water-covered areas.

Throughout the world, military equipment sales programs by various countries have caused a proliferation of advanced radar technologies and coastal air defense systems. Waterborne infiltrations and exfiltrations keep high-value air, surface, or subsurface infiltration assets offshore. This reduces detection and enables offshore assets to maneuver while remaining outside the threat ranges of coastal defense installations. For more information on waterborne operations, refer to MCRP 3-11.3A, *Special Forces Waterborne Operations*.

Waterborne insertion means include using surface craft, combatant diving, swimming on the surface, parachuting, helocasting, or a combination of these. (See fig. 7-1 on page 7-2.) Whichever

method is chosen, the unit should execute during limited visibility for maximum stealth. While planning waterborne operations, leaders must consider the METT-T and following factors:

- *Average Swim Speed*. Both surface and subsurface swim speed is about 1 kt [knot] or equal to 1 nmi [nautical mile] per hour. By using 1 kt as a planning speed, swimmers can easily apply calculations to nautical charts.
- *Average Surface Craft Transit Speed*. This can best be determined during training, by running the boat a measured nautical mile course over the ocean and recording the time. The boat should be fully combat-loaded whenever checking for speed.
- *Environmental Constraints*. Height of the tide, speed and direction of the tidal current, wind, waves, and weather. Tide height and current can be accurately predicted by referencing the tide tables and tidal current tables published annually by the National Oceanic and Atmospheric Administration.
- *Equipment*. It is imperative that all equipment is dummy-corded and waterproofed for amphibious operations.



LEGEND

BLS	beach landing site
C/C	closed circuit diving
CEP	combat expendable platform
NM	nautical mile (aviation)
nmi	nautical mile (naval)
yd	yard

Figure 7-1. Nominal Planning Ranges.

COMBAT RUBBER RECONNAISSANCE CRAFT

Ground reconnaissance units use the Zodiac F-470 CRRC for small boat operations. These crafts are noncommissioned, inflatable rubber boats powered by outboard motors and capable of limited independent operations.

Technical Information

Specifications and other information about the CRRC are as follows:

- *Inflation*. The CRRC is inflated with foot pumps, using four separate valves on the inside of the gunwale. Each valve is used to section off the rubber boat into five separate air-tight compartments.
- *Structure*. A keel tube runs the length and two speed skeg tubes serve as shock absorbers.
- *Size*. Outside measurements: 6 by 15 ft, inside measurements: 3 by 10 ft.
- *Weight*. 265 lbs including the deck.
- *Maximum Payload*. 2,710 lbs.
- *Motor*. Evinrude 55 HP multifuel engine.

Crew Responsibilities

The crew includes a coxswain, assistant coxswain, timekeeper, two observers (security), and a navigator:

- *Coxswain*. Controls the boat and the actions of the crew. Supervises the loading, lashing, and distribution of equipment. Maintains the heading and speed of the boat, while giving all commands.
- *Assistant Coxswain*. Helps the coxswain navigate and control personnel, and when needed, assumes the duties of the coxswain. Provides rear security for the crew.
- *Timekeeper*. Keeps time during dead reckoning and aids in navigation. Provides flank security during movement.
- *Observers*. Notify the coxswain of any obstacles and provides frontal security during movement.
- *Navigator*. Tracks the patrol's movement on the chart and reads the Global Positioning System (GPS) as needed. Notifies the coxswain of any changes in heading, and provides flank security during movement.

To ensure mission success, each Marine must track the patrol's location during movement. (Refer to fig. 7-2 on page 7-4.)

Training Qualifications

Training for CRRC operations occurs primarily at the unit level. Ground reconnaissance forces receive their initial training and familiarization in CRRC operations at the BRC. To sustain and build upon the skills acquired during initial training, personnel should perform refresher and advanced training on a continuous basis to maintain proficiency.

Unit CRRC training will be mission-essential task list focused. Training will be progressive to attain and maintain the skills required to conduct CRRC operations in support of assigned missions in projected environments. The use of realistic field training exercises, based on full mission profiles (FMPs), to train and evaluate the unit's CRRC capability should be the norm rather than the exception. Areas covered in these exercises include—

- Practical navigation.
- Basic seamanship.

- Launch and recovery techniques from various host platforms.
- OTH operations.
- Surf passage.
- At-sea rendezvous techniques.
- Over the beach operations.
- Chart study and publications.
- Tides and currents.
- Planning navigation routes.
- Repair and maintenance of the CRRC and outboard motor.

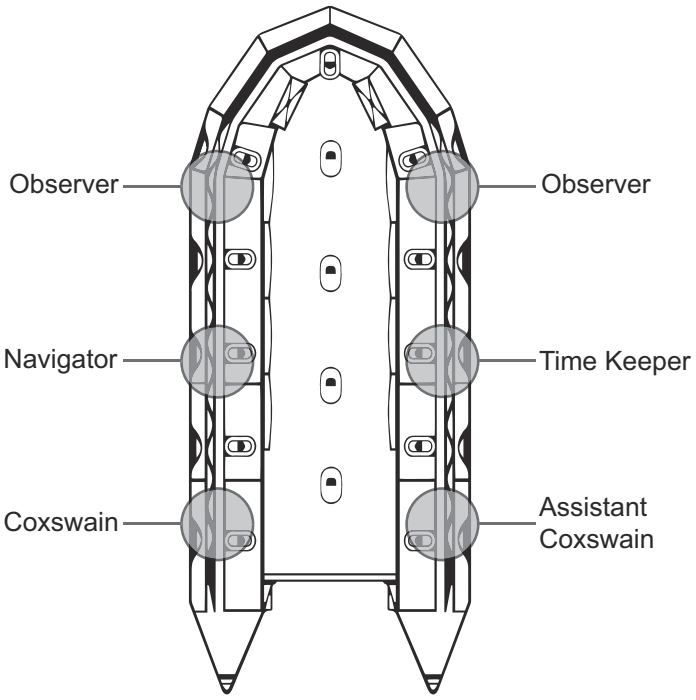


Figure 7-2. CRRC and Crew Positions.

Tactical Loads

As a rule, the CRRC should not be loaded to its maximum capacity when preparing for a mission. Radios, ammunition, and all equipment must be securely lashed to the boat.

In a crowded CRRC, personnel in the forward positions are subjected to a greater degree of physical discomfort owing to the turbulence created by the effect of swell and wave activity. Increased physical stress may diminish an individual's ability to perform once they have arrived at the objective site. The possibility of prisoners, casualties, and the evacuation of friendly forces must be taken into account when designing a load plan.

Although, the F-470 CRRC with a 55-HP engine is capable of transporting 10 personnel, it is recommended that no more than 6 personnel should be embarked. The optimum weight ceiling for the craft is 2,000 lbs. Any weight above this ceiling significantly reduces the CRRC's efficiency.

In marginal sea states or when there are extended distances to be covered, consideration should be given to limiting embarked personnel to four.

Sea Conditions

The reference for understanding and judging sea conditions is *The American Practical Navigator (Bowditch)*, chapter 37. The sea-keeping characteristics of the CRRC permit operations in sea state 3, although rough weather greatly increases the fuel consumption and risk associated with launch or recovery of the CRRC.

The high winds generally associated with higher sea states will adversely affect the maneuverability of the CRRC. High sea states and corresponding winds force slower CRRC speeds and result in longer transit times. A low sea state does not mean a benign surf-zone; sea and surf-zone conditions must be considered independently. An advantage offered by operating in higher sea states is a reduced vulnerability to detection. High sea states degrade the detection range and effectiveness of electronic sensors and contribute to tactical surprise.

Surf Limitations

The CRRC surf passage table in figure 7-3 outlines recommended operating limits for CRRC surf-zone operations. The table plots breaker height versus breaker period, and is applicable to both spilling and plunging waves. Surging breakers are not included in the table.

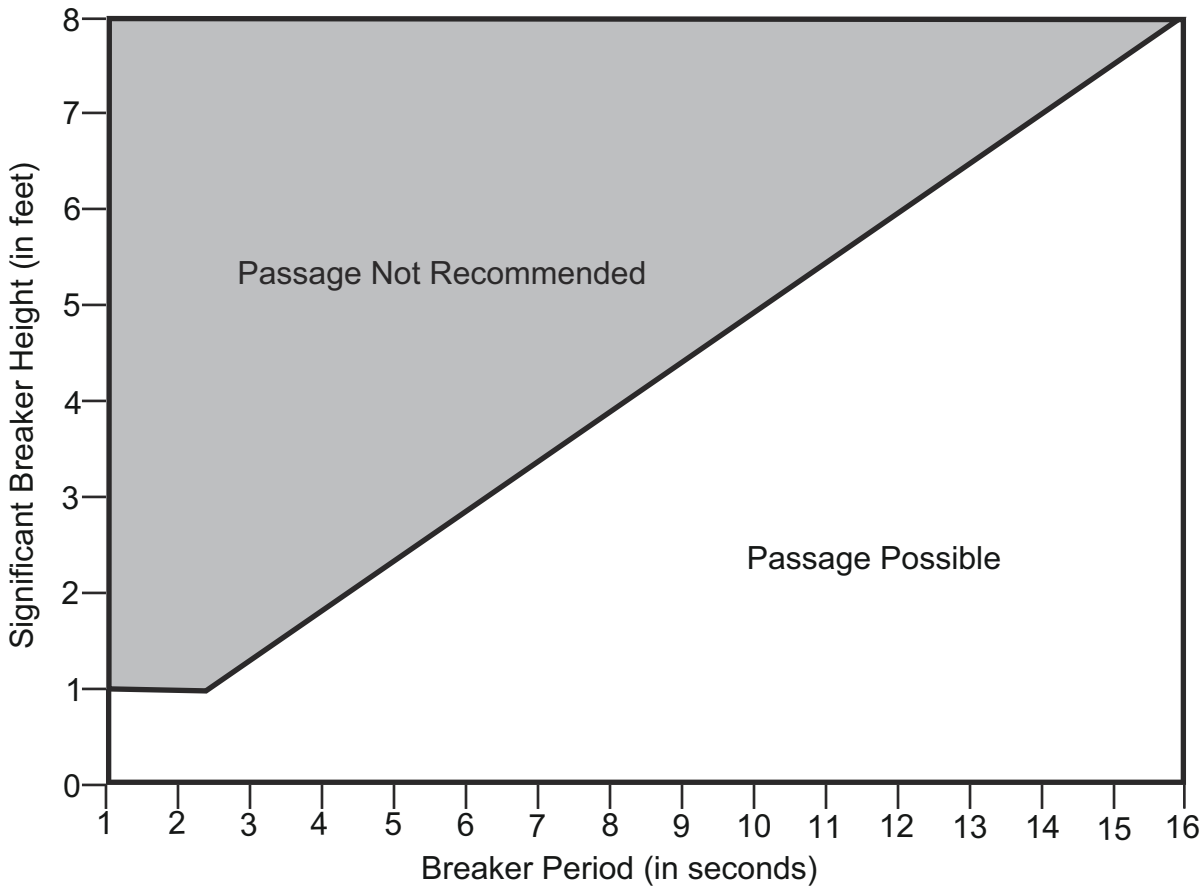


Figure 7-3. CRRC Surf Passage Table.

Plunging breakers are more dangerous to CRRC operations than spilling breakers. Greater care and judgment must be exercised as the percentage of plunging breakers increases. The recommended surf limits are provided as a guide and are not intended to usurp the judgment of officers exercising command.

Distance

The optimum CRRC launch occurs at least 20 nmi from shore, but usually no more than 60 nmi. In determining the actual distance to execute a launch, the navigator must consider the sea state, weather, transit times, and enemy electronic-detection capabilities. The objective is to keep the host platform undetected while minimizing the CRRC transit distance, thereby, reducing the physical demands caused by long open-ocean transits.

Navigation

Travelling a long distance in a small boat requires the patrol to be highly skilled in navigating by nautical charts, tides, currents (piloting), and dead reckoning. Resembling land navigation by terrain association, piloting uses visible references from land or sea, the depth of water, and other published information. Dead reckoning is the predicted advancement of a vessel's position from a known point (debarking point) to calculate the vessel's approximate position at any time. It uses distance, speed, and time but does not factor in water currents. Electronic-radio navigating uses radio waves and satellite-based positioning systems such as GPS.

COMBAT SWIMMING

Every ground reconnaissance Marine is designated as a combat swimmer. Combat swimmers must attain and maintain a high state of mental and physical alertness and readiness for the safe and successful execution of waterborne operations. For more information regarding combat swimming operations, refer to MCRP 3-11.3A.

Training Qualifications

Training for combat swimming operations occurs primarily at the unit level. Ground reconnaissance forces receive their initial training and familiarization in combat swimming operations at the BRC. To sustain and build upon the skills acquired during initial training, personnel should perform refresher and advanced training on a continuous basis to maintain proficiency.

Focused on the mission-essential task list, unit combat swim training is progressive to attain and maintain the skills required to conduct combat swimmer operations in support of assigned missions in projected environments. The use of realistic field training exercises, based on FMPs, to train and evaluate the unit's combat swimming capability should be the norm rather than the exception. Areas covered in these exercises include—

- Practical navigation.
- Cache sites.
- Launch and recovery techniques from various host platforms.
- Surf passage.

- At-sea rendezvous techniques.
- Repair and maintenance of combat swimmer equipment, which includes life vest, swim fins, dive booties, dive knife, and MK-124 (Mod 0) signal day/night flares.

Capability Certification Requirements

The combat swimming capability certification requirements provide a Service common standard to MAGTF commanders, geographic combatant commanders (GCCs), and TSOCs regarding the combat swimming capabilities that a ground reconnaissance unit possesses. The intent is that a ground reconnaisance detachment will build their certification level during their predeployment training program cycle to meet the requirements of the gaining unit. Therefore, the individual certification will only last as long as the deployment for which it was developed. The objective is that individual swimmers will gain and maintain proficiency through repetition; providing a realistic capability. For detailed description on combat swimming capability certification requirements, see app. H.

Scout Swimmers

The term "scout swimmers" refers to a pair of surface swimmers assigned a reconnaissance or security mission in advance of a boat landing or other swimmers. Scout swimmers secure and reconnoiter the BLS to ensure that it can accommodate the entire patrol. Additionally, they are tasked to reconnoiter suitable assembly areas, cache sites, and a position from which to signal the remainder of the patrol into the BLS.

HELOCAST OPERATIONS

Helocasting is a very effective means of inserting combat swimmers, combatant divers, CRRCs, and their equipment. The speed, range, and lift capability of today's rotary-wing and tiltrotor aircraft make them excellent waterborne delivery vehicles. A ground reconnaissance patrol uses an aircraft to travel the majority of the distance to their objective or BLS, and then travels the remaining distance by boat, surface swimming, or subsurface operations. (For more information pertaining to helocasting operations, refer to FM 3-05.210, *Special Forces Air Operations*.)

Considerations

Although aircraft provide the most practical and rapid means of transporting infiltration swimmers to the vicinity of the BLS, air operations can be more complicated than other means, such as surface craft or submarine infiltration.

Operational requirements must be followed as closely as possible during training under usual and unusual conditions (adverse weather, terrain conditions, and night operations). Personnel must use sound judgment to determine what action to take depending on the nature and severity of the condition.

The cast master (CM) ensures the aircraft does not exceed 10 ft of altitude at 10 kt when dropping personnel only. Initial training drops should be conducted at 5 ft and 5 kt, when appropriate. When casting from a ramp, swimmers assume a normal "prepare to land" attitude upon exiting. The

ramp should be 10 degrees below horizontal in the casting position. When casting from a side door, cast from a seated position. Swimmers push off, face opposite the direction of flight, and assume a normal "prepare to land attitude."

When casting a CRRC ensure that the helicopter has descended to 5 ft, or as low as possible, and has slowed to 10 kt. Swimmers will follow the CRRC after it has exited the aircraft. Upon entering the water, all swimmers will give an okay signal to each other, the helicopter CM, and the safety boat.

Safety

The objectives of air-water operations training are to safely conduct and to maintain maximum proficiency in the execution of air-water operations. A safety briefing must precede any air-water operation. The briefing should consist of, but is not limited to, a review of the following:

- Area hazards.
- General aircraft safety.
- Characteristics of equipment associated with air and water operations.
- Equipment inspection.
- Method of infiltration and/or recovery.
- Hand and arm signals, including emergency signals.
- Location of safety boats and marking procedures.
- Medical coverage.
- Primary and alternate communications requirements.
- Night operation requirements.

Due to the hazards involved, safety must be emphasized in all aspects of planning and executing helicopter casting operations. Safety considerations include, but are not limited to, the following:

- Immediately before the operation, the safety officer physically reconnoiters the casting DZ verifying the water depth and the absence of obstacles.
- The water depth must be at least 15 ft.
- Motorized safety boat(s) are in position.
- Radio voice communications is established between the safety officer, safety boat(s), aircraft, and range control.
- A qualified, nonparticipating corpsman is present.
- Aircraft drop speed and altitudes are correct.

Safety Personnel Qualification Requirements

Before conducting helocasting operations, the CM and the safety officer must be qualified on helocast operations and must meet the criteria discussed in the following subparagraphs.

Cast Master. Units should select personnel to become qualified as a CM based on the individual's demonstrated leadership capabilities and knowledge of helocast operations. Designated in writing by the unit commander, the individuals selected, qualified officers or NCOs, must have completed the initial training for helocasting as well as received instructions on and demonstrated proficiency in rigging, inspecting, and preparing equipment used in helocasting operations. The Marines selected as CMs also must have received instructions on and demonstrated proficiency in the following duties:

- Coordination responsibilities.
- Troop and aircrew briefings.
- Organization of the personnel involved in the operation.
- Emergency procedures.
- Instruction to pilots for maintaining the aircraft in position over the target during the operation.
- Hand and arm signals.

Safety Office. The safety officer must be an officer or NCO who is qualified as a CM and range safety officer. The safety officer, like the CM, is designated in writing by the unit commander.

Helocast Operations Qualification Training

Training for helocast operations occurs primarily at the unit level. Ground reconnaissance forces receive their initial training and familiarization in helocast operations at BRC.

Sustainment Training. Within 24 hours of conducting air-water operations, individuals will receive unit training in the procedures to be used during the operation. At a minimum, this training will include rigging and inspecting individual equipment and the accompanying equipment in the CRRC (if applicable) as well as a dry-land rehearsal.

Refresher Training. Marines who have not participated in helocast training during the past 12 months will undergo refresher training before being included in the operation. Refresher training consists of rigging and inspecting individual equipment and the accompanying equipment in the CRRC, if applicable. Refresher training should also include hand and arm signals, including emergency signals; water entries, including combat equipment when applicable; and a dry-land rehearsal.

SUBSURFACE WATERBORNE OPERATIONS

Subsurface waterborne operations are a means to an end. Despite the increased use of sophisticated coastal surveillance systems and active surface and air interdiction efforts on the part of regional governments, local inhabitants continue to engage in various illicit activities such as smuggling and illegal fishing.

In many parts of the world, long coastlines, extensive waterways, and small undermanned navies exacerbate these problems. The clandestine nature and high probability of success for these illicit

operations mirror ground reconnaissance units' requirements for successful infiltrations into, or exfiltrations out of, potentially hostile AOs.

The US Marine Corps has one type of diver, the MCD; this diver is trained in basic scuba and MK-25 rebreather operations. Marine combatant divers conduct underwater operations to facilitate amphibious reconnaissance, underwater reconnaissance, ground reconnaissance, AFO, surveillance, and operational environment shaping in support of the MEF, other MAGTFs, or the Marine component of a joint force.

For further information on all diving operations, refer to MCRP 3-11.3A; MCRP 3-35.9 A, *Military Diving Operations*; and Marine Corps Order (MCO) 3150.4, *Marine Corps Diving Policy and Program Administration*.

Considerations

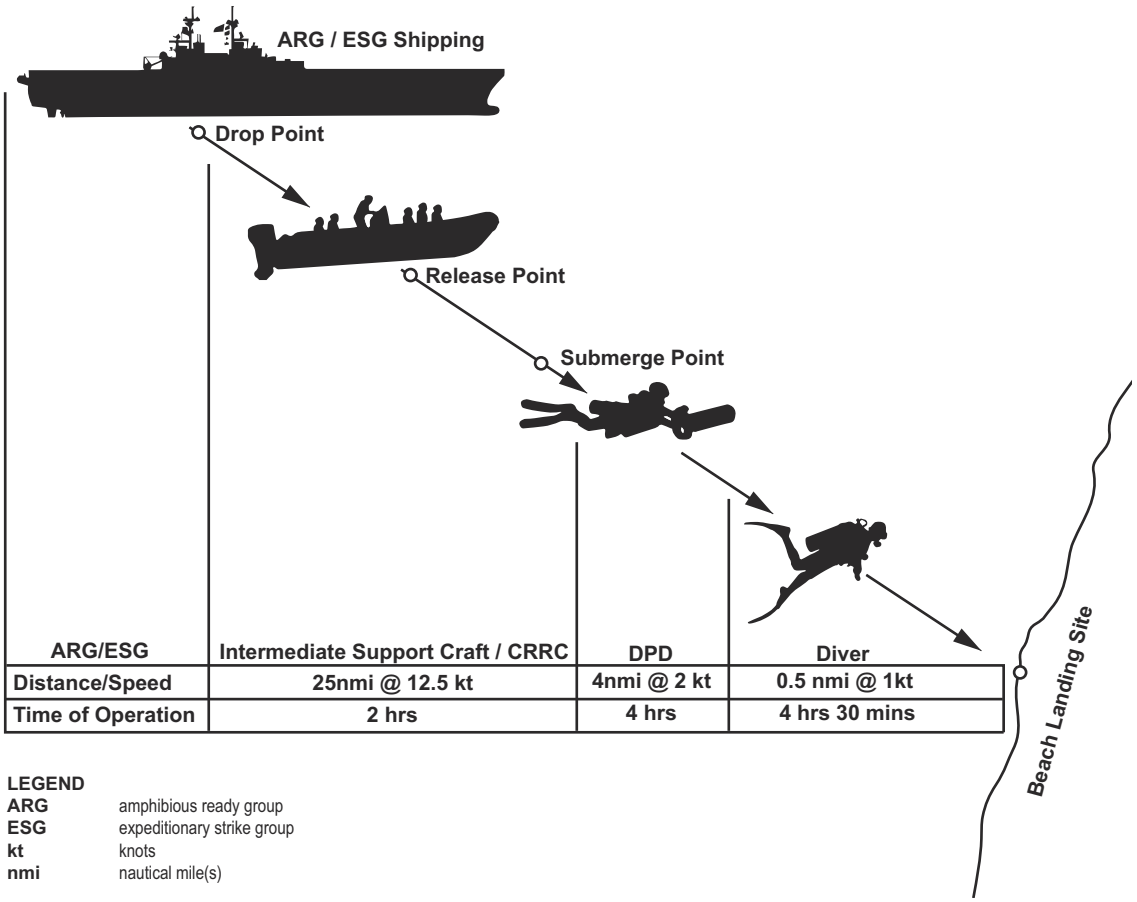
In addition to the inherent limitations and risks common to all military dive operations, MCDs have unique considerations for their employment. The following must be considered when employing MCDs. (For more information on the employment considerations and limitations of MCDs, refer to MCRP 3-35.9A.)

The Marine Corps does not possess the organic tactical boat assets to conduct OTH surface movement to a dive insert point. Any execution of these types of missions by Marine forces will be dependent on tactical boat support from the joint force. The sole Marine Corps tactical boat asset is the CRRC, which has very limited applicability in this mission area.

For planning purposes the average speed for both surface and subsurface swimming for MCDs is 1.0 kt unassisted. This translates into a maximum distance of 1 nmi per hour under ideal conditions. Assisted by the DPD, the average motorized speed is 1.2 kt. Due to less energy expended, the DPD more than doubles the distance a dive team is able to travel. A "propulsion device" is required to achieve the desired operational safety stand-off requirements imposed by the US Navy; Navy stand-off requirements support international-waters observance and provide protection from potentially hostile shorelines. (See fig. 7-4 on page 7-11.)

Capabilities

Ground reconnaissance forces provide the Marine Corps' underwater reconnaissance capability (URC). The URC encompasses the latest in technology to improve combat performance, endurance, and force protection. The employment of this capability should change as technology changes to maintain effective reconnaissance in the littoral zone. This will require an equipping process to take advantage of rapidly emerging technologies, to support the ground reconnaissance patrol's ability to persist in the environment, collect information requirements, and protect the force. Additionally, the URC should provide for the latest amphibious sensor capabilities, weapons, diving equipment, communications equipment, targeting equipment, and tactical support craft platforms.



ARG/ESG	Intermediate Support Craft / CRRC	DPD	Diver
Distance/Speed	25nmi @ 12.5 kt	4nmi @ 2 kt	0.5 nmi @ 1kt
Time of Operation	2 hrs	4 hrs	4 hrs 30 mins

LEGEND

ARG	amphibious ready group
ESG	expeditionary strike group
kt	knots
nmi	nautical mile(s)

Figure 7-4. Sample Marine Combatant Diver Profile.

Tasked-organized Marine Corps ground reconnaissance elements plan, coordinate, and execute OTH clandestine subsurface dive operations via Navy ships (surface and subsurface) or aircraft to conduct full spectrum amphibious and ground reconnaissance missions. Ground reconnaissance elements are manned, trained, and equipped to conduct combatant dive operations in the following mission areas:

- *Conduct Underwater Reconnaissance*. Collect and report information concerning the hydrographic characteristics of a particular area well in advance of an amphibious landing force. This type of operation includes conducting subsurface, detailed hydrographic survey in support of all US Navy landing craft and US Marine Corps AAVs.
- *Conduct Amphibious Reconnaissance/Surveillance*. Collect and report information about the activities and resources of an enemy in a particular area well in advance of an amphibious landing force. This type of mission includes conducting initial and/or confirmatory beach reconnaissance as well as ITG of AAVs, tactical boats, amphibious ships, landing craft, or aircraft.
- *Conduct Subsurface Insertion and Extraction*. The combatant dive teams are inserted/extracted in order to clandestinely infiltrate and exfiltrate designated ground reconnaissance mission areas.
- *Conduct Subsurface Infiltration and Exfiltration*. These missions are conducted in support of AFO of littoral/coastal areas and defenses to includes, but are not limited to, ports, harbors, piers, estuaries, fords, and bridges.

- *Conduct Subsurface Search and Recovery*. Combatant dive teams search and recover sensitive equipment or personnel.
- *Conduct Hull Search Operations*. These operations are in support of force protection for the amphibious ready group, expeditionary strike group, and maritime preposition squadron shipping. These operations include, but are not limited to, searching the ship's hulls, piers, harbors, and ports as well as the surrounding area fords and bridges.

COMBATANT DIVING ORGANIZATION AND DUTIES

The duties and safety procedures for personnel and units conducting combatant diving operations are to ensure interoperability with USSOCOM elements and to promote operational readiness and safety through a uniform execution of policy and training. For more information on diving operations, refer to MCRP 3-11.3A, MCRP 3-35.9A, and MCO 3150.4.

Unit Types

The following US Marine Corps units have a valid requirement to develop and maintain a viable diving capability to support prescribed missions and approved concepts of operations using equipment organic to the organization:

- Reconnaissance battalions.
- FORECON companies.
- Training and Education Command.
- Marine Corps Systems Command.
- Marine Detachment, Naval Diving and Salvage Training Center (NDSTC).
- Marine Forces Special Operations Command.

Reconnaissance battalions and FORECON companies provide forces with a platoon level combatant diving capability to supported units. These combatant diving platoons can be tasked organized to provide the requisite number of maneuver forces required to accomplish an assigned mission.

Specific Duties

The US Navy is designated by the DOD as the executive agency for military diving operations. For more information on assigned duties specific with regards to the planning and conduct of diving operations specific to combatant diving, refer to MCRP 3-11.3A, MCRP 3-35.9A, and MCO 3150.4.

DIVE OPERATIONS PLANNING

For convenience, the planning of MCD dive operations is normally divided into vertical and horizontal dives. Vertical dives are usually open-circuit, such as working dives that range from

annual requalification to underwater reconnaissance (permissive environment) or search and recovery dives. Horizontal dives are normally closed-circuit infiltration or exfiltration and training dives.

Equipment

Combatant diving places extra stress on the human body; the one-size-fits-all approach to equipment acquisition cannot adequately meet all of the unique requirements of MCDs and their missions. The equipment that units and divers are allowed to purchase or use are specified in Naval Sea Systems Command (NAVSEA) Instruction 10560.2_, *The Diving Equipment Authorized for Military Use (AMU) Program*. Ground reconnaissance units can use this list to tailor their equipment purchases to more closely satisfy requirements unique to their particular environment or mission.

Underwater Navigation

The success of any type of dive mission is directly dependent on the unit's ability to arrive at its objective. Underwater navigation poses additional challenges because of the limited opportunities for terrain association. These problems are compounded if the route is complicated by "doglegs" or course changes. The most reliable navigation technique is dead reckoning with a magnetic compass. Dead reckoning requires an accurate determination of distance and direction:

- *Distance*. Divers determine distance using two methods: pace (kick) count or timed distance runs. Both methods require the diver to swim a measured course a number of times so that a valid average can be determined. It is imperative that the swim be conducted with the equipment load that will be worn on the mission so the equipment's drag can be factored in.
- *Directional Information*.This information can be provided by a compass designed to be worn around the wrist and ball-type compasses that are secured to some type of board.
- *Tactical Peeks*. Used when pinpoint accuracy is absolutely essential. During transit, one diver on azimuth very slowly breaks the surface just to the point where he can see the objective and verify his position. He then returns subsurface as quickly as possible without unduly disturbing the surface of the water.

The accuracy of this method increases as divers gain experience conducting practice swims.

Limited-Visibility Diving Operations

Planners define limited visibility as diving under conditions where a diver cannot distinguish objects at a distance of 10 ft or less. Practicing in a pool at night with the lights out or with masks blacked out will improve skills. Visibility is affected by the following factors:

- *Limited Visibility*. Caused by particles suspended in the water or a lack of ambient light.
- *Turbidity*. The description or measurement of the amount of suspended particles in the water and their effect on visibility. Turbidity is caused or exacerbated by surface runoff, high winds, rolling surf, up swellings, and extreme tidal changes.
- *Tide Levels*. Divers can expect better visibility at high tide than at low tide. A minus tide (a low tide lower than the mean low tide) will greatly reduce visibility.

- *Proximity to Shore*. Rivers and their outflows, harbors, bays, and other near-shore areas within the littoral zone are all subject to increased siltation and other conditions that contribute to reduced visibility.

Contaminated Water Diving

In addition to tactical requirements, MCDs may occasionally be called upon to dive in the vicinity of harbors, sewers, or industrial outlets that discharge contaminated waters. The most common pollutants are sewage; surface or agricultural runoff; chemical or manufacturing wastes; and petrochemicals (usually as a result of spills or military operations). For more information, refer to MCRP 3-11.3A.

Working in or around these pollutants will expose Marines to disease or chemical hazards. Either threat has the potential to incapacitate personnel and destroy mission-essential equipment. Ground reconnaissance elements must be prepared to deal with the event of operating in contaminated waters.

Divers conducting operations in polluted water are especially vulnerable to skin irritations and ear infections. Other more virulent pathogens (e.g., hepatitis, E.Coli, and salmonella) pose serious, potentially life-threatening risks to unprepared or unprotected divers. When planning a dive operation in waters that are known to be polluted, protective clothing must be used and appropriate preventative medical procedures taken. The most effective medical protective measures are an active vaccination program with emphasis in blood and waterborne pathogens and a rigorously performed postdive decontamination program.

Altitude Diving

Due to the reduced atmospheric pressure, dives conducted at altitude require more decompression than identical dives conducted at sea level. Standard air decompression tables, therefore, cannot be used as written. The exact procedures for altitude diving, to include work sheets and tables, are in the current US Navy diving regulations; the following are guidelines:

- No correction is required for dives conducted at altitudes between sea level and 300 ft. The additional risk associated with these dives is minimal.
- At altitudes between 300 and 1,000 ft, correction is required for dives deeper than 145 feet of seawater (FSW).
- At altitudes above 1,000 ft, correction is required for all dives.

Cold Weather Diving

The MCD forced to dive in cold water must be aware of the potential risks and knowledgeable in the techniques and equipment available to mitigate those risks and accomplish the assigned mission. The MCDs conduct short duration dives in extremely cold water where the surface temperature is 37 ºF and below. Typical missions in these conditions include search or underwater reconnaissance dives; inspecting ice conditions for cracks, pressure ridges, or thin spots before crossing by vehicles; and supporting amphibious operations.

Ice diving is not normally required of MCDs. Ground reconnaissance units that find it necessary to conduct ice dives should refer to the specialized procedures outlined in current US Navy diving

regulations. They should conduct internal training to ensure that all personnel are adequately prepared to perform both the diving and the support tasks required to conduct a safe operation.

The Diver and Wet Suit Use

To be effective, each diver should have an assigned wet suit (and dry suit when appropriate) that has been individually measured and fitted. The wet suit must consist of NAVSEA instruction 10560.2_ approved items that can be used in water temperatures of 30-32 ºF.

These protective suits allow the diver the flexibility to choose the appropriate level of protection based on the water temperature, the expected level of exertion, and personal comfort. Semicustom wet suits are the preferred solution because generic sizing does not provide an adequate range of sizes to fit and protect all divers in extremely cold water. To meet this requirement, commands may purchase off-the-shelf suits from reputable manufacturers or commercial sources in accordance with the guidance in the NAVSEA instruction 10560.2_. After the suit has been sized and issued to the diver, he is responsible for its use and maintenance. Due to issues like individual sizing and personal hygiene, suits should not be swapped between divers.

CLOSED-CIRCUIT DIVE OPERATIONS

Closed-circuit diving is an ideal medium for conducting clandestine operations where avoiding detection is paramount. Closed-circuit underwater breathing apparatus (UBA) are eminently suited for the conduct of maritime special operations. Underwater breathing apparatuses are used by ground reconnaissance units, Army Special Forces, Navy SEAL teams, and Marine SOF in shallow-water operations. Planning ranges for infiltration swims are approximately 2.5 nmi depending on equipment loads and diver conditioning.

Ground reconnaissance platoons are most likely to use closed-circuit diving when conducting underwater reconnaissance (hydrographic surveys), amphibious reconnaissance or surveillance (confirmatory beach reports), and AFO. The operational duration of the UBA may be limited by either the oxygen supply or the duration of the canister used for absorbing carbon dioxide from the system. Infiltration and exfiltration using the UBA will normally take place at a depth of 20 FSW or less. At a maximum depth of 20 FSW, the diver's total time of dive should not exceed 240 minutes (4 hours). Complete guidance for operational depths and dive times may be found in NAVSEA SS521-AG-PRO-010, *U.S. Navy Dive Manual*.

Training for closed-circuit diving operations occurs primarily at the unit level. Marine combatant divers receive their initial training and qualification in closed-circuit UBA at the Marine Combatant Diver Course in Panama City, Florida. This training includes classroom instruction, pool training, compass swims, advanced navigation techniques, and underwater infiltration and exfiltration dives. The Marines function as combatant diver team members during underwater infiltration and exfiltration swims with combat equipment.

Using small craft as the delivery vehicle, the Marines are trained to perform turtle-back swims immediately followed by a closed-circuit underwater infiltration. Marines are trained to conduct

oxygen charging procedures using an oxygen transfer pump system. The end of training is marked with the Marines, in four- to eight-man ground reconnaissance teams, executing a field exercise that requires them to infiltrate surface and subsurface, move to and conduct assigned missions on land, and extract from their assigned objective area.

OPEN-CIRCUIT DIVE OPERATIONS

Open-circuit diving is an ideal medium for training and support. It is the simplest method to get underwater and stay there long enough to do useful work. It may be used for any operation not requiring secrecy or when underwater detection capabilities are very limited. Planning ranges for infiltration swims are approximately 1,500 yards depending on equipment loads and diver conditioning.

Ground reconnaissance platoons are most likely to use open-circuit diving for initial diver training, unit training, training support, underwater reconnaissance in a permissive environment, ship bottom search, and underwater search and recovery. It must be used whenever the operational depth exceeds the capabilities of the closed-circuit UBA (20 FSW with excursions to 50 FSW). Depth limits for open-circuit diving are 130 FSW in training and 190 FSW in exceptional circumstances. Complete guidance for operational depths may be found in NAVSEA SS521-AG-PRO-010 Rev 6, *U.S. Navy Diving Manual*.

Training for open-circuit diving operations occurs primarily at the unit level. Marine combatant divers receive their initial training and qualification in open-circuit SCUBA [self-contained underwater breathing apparatus] at the Marine Combatant Divers Course in Panama City, Florida. This training includes classroom instruction, pool training, ascent training, and lost equipment searches. Marines function as dive team members both topside and in the water. Preventive maintenance is conducted on all open-circuit SCUBA equipment and related underwater accessories as well as SCUBA charging procedures.

SUBMARINE OPERATIONS

A submarine's ability to pass undetected through the oceans anywhere in the world makes it an ideal infiltration and exfiltration asset. Using submarines in conjunction with ground reconnaissance units has proven to be an effective method of conducting clandestine operations in the past, and this effectiveness will continue in the future.

Today, submarines are used to clandestinely transport infiltration platoons to debarkation in the vicinity of their AO. The platoons traverse from the submarine to their BLS and into their AO. For clandestine operations along coastal areas, the submarine's ability to surface and quickly disembark full platoons with extensive equipment and then submerge and disappear make the submarine ideal for the landing and withdrawal of platoons or teams. The submarine's ability to operate while submerged and the team members' ability to lock out (debark) and lock in (embark)

while the submarine is submerged offer MCDs the utmost flexibility. For more information on submarine operations, refer to MCRP 3-11.3A.

Submarines

The US Navy maintains a fleet of submarines, some of which are suitable for use to insert or extract ground reconnaissance platoons. Some allied navies are also using submarines, mainly diesel-electric boats, that can be used by Marines.

Submarine training is arranged at "presail" conferences in a process similar to the joint airborne and air transportability training conferences used to obtain training opportunities with US Air Force assets. Detachments desiring to conduct submarine training should plan well in advance and follow-up all coordination. As the time approaches for the submarine operations, platoons must schedule and complete requisite training, such as tower training.

Debarkation

There are several ways of debarking combat swimmers or boat teams from submarines. Tactical debarkation may be conducted from a surfaced or submerged submarine.

Surface Debarkation of Combat Swimmers. The coastal defense capabilities and shallow water, near-shore depths of most threat nations would normally prevent a submarine from getting close enough to the shore to disembark combat swim teams. The most probable reason for a platoon to leave a surfaced submarine as swimmers would be to transfer to another vessel or helicopter.

Submerged Debarkation of Combat Swimmers (Lock Out). Combat swimmers may debark through the escape trunk of a submerged submarine. The successful use of submarines requires that operators be proficient in basic military SCUBA and small-boat operations.

Advantages. The submarine remains completely submerged, thus contributing to stealth. If the water depths allow, the submarine can also be used to get the unit closer to shore.

Disadvantages. The number of mission support personnel who go on the operation is limited. The amount of time needed to prepare for (train-up) and execution (hours at periscope depth). Level of difficulty involved in the actual lock-out procedure.

Surface Debarkation of Boat Teams A well-rehearsed platoon can be launched in less than 15 minutes. Inflatable boat teams may embark from a fully surfaced submarine by either dry deck launching or wet deck lauching of the CRRCs or kayaks.

Dry Deck Launching. The CRRCs/kayaks are launched over the side of a fully surfaced submarine. The platoon/team loads and lashes all equipment (waterproofed) before launching. Troop debarkation is expedited if the platoon/team uses caving ladders or pilot ladders.

Wet Deck Launching. The submarine submerges from under the fully loaded and manned CRRCs/kayaks. The platoon/team loads and lashes all equipment in the boats and then takes their places inside the boats. The submarine can be underway or stopped in the water during these preparations. This method is preferred because the boats are fully loaded and manned before being placed in the water.

Dry-Deck Shelter and Mass Combat Swimmer Lock Out. The dry-deck shelter (commonly referred to as DDS) is used to eliminate the complicated procedures associated with the conventional lock-in and lock-out procedures. The dry-deck shelter provides submarines with a greater capability of deploying MCDs. They can transport, deploy, and recover ground reconnaissance platoons from CRRCs and DPDs, all while remaining submerged. In an era of littoral warfare, this capability substantially enhances the combat flexibility of both the submarine and the ground reconnaissance commander.

The dry-deck shelter is comprised of three compartments: the trunk, the hangar, and a recompression chamber. The hangar is a cylinder with elliptical ends that houses up to 20 MCDs and their CRRCs/ DPDs. Inside the hangar, there are Navy divers who assist the operators and their equipment to the surface.

Withdrawal by Submarine

Tactical recovery of combat swimmers or boat teams can be made by a surfaced or submerged submarine. Marine combatant divers or boat teams move to a predetermined recovery area upon completion of their mission. The unit should attempt to contact the submarine before arriving at their recovery point. Upon arrival, the unit initiates a prearranged signal to enable the submarine to locate the unit's precise position. Upon rendezvous, the unit is normally towed out of the recovery area by the submerged submarine to a location where re-embarkation can occur safely. This procedure is known as a Fulton Recovery.

Surface Recovery of Combat Swimmers. The submarine may surface after the combat swimmers have made physical contact with it and recover them via the conning tower or main deck hatch. Surface recovery of combat swimmers may be mandatory when some men are wounded or otherwise physically unable to make a submerged recovery.

Submerged Recovery of Divers (Lock In). Divers may be recovered aboard a submerged submarine that is underway. Underway recovery of divers is made easy by the divers stretching a line across the path of the approaching periscope. After the periscope makes contact with the rope, the divers on both ends of the rope haul themselves hand-over-hand up to the periscope. The divers use a descending line rigged from the periscope to the escape truck to descend and lock in to the submarine.

Surface Recovery of Boat Teams. A submarine can recover boat teams (CRRCs or kayaks) through the conning tower or a main deck hatch by either dry deck or wet deck recovery. Upon arrival in the recovery area, two boats connect a 75- to 100-foot hauling line between them, using towing bridles and a quick release (Pelican Hook). Additional boats are secured to these boats with towing bridles.

Dry Deck Recovery. The submarine surfaces completely. The boat teams come alongside, unload the boats, pull the boats up onto the deck, and prepare to stow the boats. Wet deck recoveries are faster and easier than dry deck ones, but require more training and expertise.

Wet Deck Recovery. Occurs when the submarine has reached a safe area for surfacing; it surfaces to a point that its decks are awash. The boat teams maneuver onto the water covered deck (fore or aft of the conning tower), unload, and prepare to stow the boats. The breached submarine completes

"blowing the tanks" and surfaces completely. This method allows the boat teams to safely stow their boats and re-embark via the conning tower or the main deck hatch.

PROFICIENCY AND REQUALIFICATION REQUIREMENTS

Combatant diving skills are perishable and require periodic sustainment training to maintain proficiency. Proficiency requirements are intended to sustain basic individual skills only, and not advanced individual skills or unit capabilities. For more information, refer to MCRP 3-35.9A and MCO 3150.4.

The combatant diver capability certification requirements provide a Service common standard to GCCs and TSOCs regarding the combatant diving capabilities that a ground reconnaissance unit possesses. Category I-III certifications exist as a method to express the capability that a ground reconnaissance unit possesses when task-organized and supplied to a HHQ. The unit attains the required level of capability and then maintains that capability through repetition every 120 days. The certification expresses to the HHQ the unit's capability and produces a baseline from which risk assessment can be applied to decide risk versus gain in the employment of that capability. For detailed information on combatant diver capability certification requirements, see app. H.

HELICOPTERBORNE OPERATIONS

Air operations in support of ground reconnaissance units are characterized by penetration flights into hostile or politically sensitive areas to infiltrate, resupply, and extract reconnaissance Marines. Helicopterborne operations include airborne, but are not limited to, air-to-land, rappelling, fast rope insertion, SPIE, and helocasting operations.

(For more information on air operations, refer to FM 3-05.210; MCWP 3-11.4, Helicopterborne Operations; MCRP 3-11.4A, *Helicopter Rope Suspension Techniques (HRST) Operations*; and MCO 3500.42_, *Marine Corps Helicopter/Tiltrotor Rope Suspension Techniques Policy and Program Administration*.

Missions

Missions are normally flown during hours of darkness or periods of limited visibility by a variety of conventional and nonstandard aircraft. The types of air missions used to support ground reconnaissance units include the following:

- Insert, resupply, and extract.
- CSAR.
- Personnel recovery.
- Materiel pickup and delivery.
- Surveillance and reconnaissance (visual, photographic, electronic).

- CAS or interdiction within assigned capabilities.
- Diversionary tactics.

Characteristics of Helicopterborne Operations

Air operations in support of ground reconnaissance units are normally unescorted, single aircraft missions flying at minimum clearance altitude. In daytime, this altitude is below 500 ft; at night, altitude is at or below 1,000 ft. These operations typically employ many of the following characteristics:

- Frequent course changes (doglegs) en route to and departing from the LZ, PZ, or DZ.
- Predetermined flight track from the IP to the LZ, PZ, or DZ.
- Arrival at the LZ, PZ, or DZ within a designated time limit, track, and drop altitude.
- Sorties to overfly the primary and alternate LZs, PZs, or DZs. When conditions prevent the aircraft from using the primary zone, it proceeds to the alternate zone to attempt completion of insertion/extraction.
- Fixed- or rotary-wing gunship CAS or interdiction operations.

Ground reconnaissance patrols use a variety of insertion and extraction techniques from rotary-wing and tiltrotor aircraft. Each aircraft has its own advantages, disadvantages, requirements, and criteria. The ground reconnaissance patrol will determine the best insertion and extraction methods for the AO according to the patrol's capabilities, needs, and mission.

Rotary-Wing Air Operations. Used to conduct rappelling, fast rope insertion, SPIE, and helocasting operations. Rotary-wing aircraft have limited use for resupply missions. Compared with fixed-wing aircraft, rotary-wing aircraft are usually slower, have less range and cargo capacity, and are more vulnerable to antiair defenses.

Tiltrotor Air Operations. A tiltrotor aircraft combines the vertical takeoff, hover, and vertical landing qualities of a helicopter with the long-range, fuel efficiency, and speed characteristics of a turboprop aircraft. Its mission is to conduct long-range insertion, extraction, and resupply missions. Disadvantages include noise, landing area, and availability of aircraft.

SPECIAL PATROL INSERTION AND EXTRACTION SYSTEM

The Marine Corps designed SPIE to insert and extract patrols where a helicopter landing are impracticable, including water insertions/extractions. However, it is not the recommended method of insertion because the patrol members are exposed to enemy observation and fire the entire time. During SPIE operations, the SPIE rope is lowered into the pickup area from a hovering helicopter and patrol personnel hook up to the SPIE rope. The helicopter lifts vertically from the extract zone until the rope and personnel are clear of obstructions, then proceeds in forward flight to a secure insert zone. The rope and personnel are treated as an external load; therefore, airspeeds, altitudes, and oscillations must be monitored.

To safely conduct and maintain maximum proficiency in the execution of SPIE operations, all personnel must complete initial and sustainment training. Personnel being extracted must receive training in the use of SPIE before insertion. Personnel must also complete the appropriate training to become a HRST master, as required.

A thorough briefing is required for all participants. The HRST master will always give a safety briefing and conduct an equipment inspection as well as conduct briefings to ensure the personnel being extracted and the aircrews know the procedures. This briefing is crucial when additional assets (gunships, aerial observers, or artillery) are used in conjunction with the helicopter extraction. For detailed information on SPIE, refer to MCRP 3-11.4A and MCO 3500.42_.

FAST ROPE INSERTION SYSTEM

Small units use the fast rope interface kit for rapid insertion using rotary-wing or tiltrotor aircraft in confined areas. Using this system, ground reconnaissance Marines can insert directly onto the objective or into an area where a helicopter cannot land. Insertion via fast roping is preferred over rappelling due to its overall efficiency, effectiveness, and ease of installation. With proper training, Marines can quickly acquire and retain the skill required to fast rope which is less perishable than rappelling and requires less practice to remain proficient. The simplicity and speed of fast rope operations are its greatest attributes; however, fast roping does have a certain amount of risk. Since personnel are attached to the rope by only their hands and feet, Marines must have only a limited amount of equipment and supplies.

Before conducting a fast rope training mission, participants must have a basic understanding of the requirements. All personnel must complete initial, sustainment, and refresher training to safely conduct and maintain maximum proficiency in the execution of fast rope operations. Personnel must also complete the appropriate training to become a HRST master, as required. All units must conduct a safety briefing prior to conducting fast rope training or operations. For detailed information on fast rope operations, refer to MCRP 3-11.4A and MCO 3500.42_.

RAPPELLING TECHNIQUES

Marines rappel from a hovering helicopter as a means of insertion when terrain, vegetation, or the tactical situation do not allow for landing. Rappelling is the technique used to lower oneself down a rope quickly when fast rope equipment is not available or when the load carried by the roper is too heavy to permit safe fast rope operations. Additionally, rappelling is a useful means of descending from an elevated area when conducting mountaineering or shipboard operations.

Rappelling from a helicopter will only be conducted by units whose operational requirements dictate insertion by that means. To safely conduct and maintain maximum proficiency in the execution of rappelling operations, participants must have a basic understanding of the requirements and must complete initial, sustainment, and refresher training. Personnel must also

complete the appropriate training to become a HRST master, as required. All units must conduct a safety briefing prior to conducting rappel training or operations. For more information on rappelling techniques, refer to MCRP 3-11.4A and MCO 3500.42_.

PICKUP AND LANDING ZONES

Marine Corps aviation can increase the mobility, as well as the flexibility, of ground reconnaissance units. Once inserted, ground reconnaissance patrols gather combat intelligence and shape the battlespace, leading to rapid and decisive action by friendly forces. Rapid maneuver of ground reconnaissance forces around the battlefield is paramount to successfully exploit their full potential. For more information on PZs and LZs, refer to MCWP 3-11.4.

Landing Points

Pickup and landing zone size requirements depend on the type and number of helicopters as well as the minimum acceptable distance between aircraft. (Refer to table 7-1 on page 7-23.) Small unit leaders should be skilled in selecting and marking PZs and LZs. Landing zones should have the following characteristics:

- *Size*. Each aircraft requires a circular landing point, separate from those designated for other aircraft, and free of obstacles. (Refer to fig. 7-5 on page 7-23.)
- *Surface Conditions*. The PZ or LZ should allow for clear visibility of the touchdown point. It should be free of landing hazards such as blowing snow, dust, or sand. It should contain no obstacles that could damage landing aircraft such as trees, stumps, or large rocks. The surface must be firm enough to support the traffic.
- *Ground Slope*. Generally, if the ground slopes 0 to 6 percent, then the pilot should land upslope. If the ground slopes 7 to 15 percent, then they should land side slope. Over 15 percent, they should not touch down at all, but they may, if conditions allow, hover to drop off or pick up personnel or equipment.
- *Obstacles*. For planning purposes use an obstacle clearance ratio of 10 to 1 on the approach and departure ends of the PZ or LZ. That is, a helicopter approaching or departing directly above a ten-foot tall tree needs 100 ft of horizontal clearance. Mark obstacles within the PZ and LZ only if the enemy cannot see the markings.
- *Approach and Departure*. Analyze the terrain surrounding a possible PZ or LZ for air traffic patterns. In a tactical situation, avoid repeatedly approaching the PZ or LZ over the same ground. Choose approaches that are free of obstacles. Pilots should land into the wind, but away from the sun. Ideally, they approach and depart along the axis of the LZ, over the lowest obstacle, and into the wind.
- *Load Size*. When a helicopter is loaded to near maximum lift capacity, it needs more distance to lift off and land. It cannot ascend or descend vertically. The nearer the load to maximum, the larger the PZ or LZ must be to accommodate a flight.

Table 7-1. Pickup Zone/Landing Zone Diameters.

Aircraft Type	Rotor Blade Diameter (ft)	Landing Zone Diameter Daylight (+100)/Night (+150)
UH-1Y	50	150/200
UH-60	53	150/200
CH-46	85	185/ 235
MV-22	38 each blade	185/235
CH-53	100	200/ 250

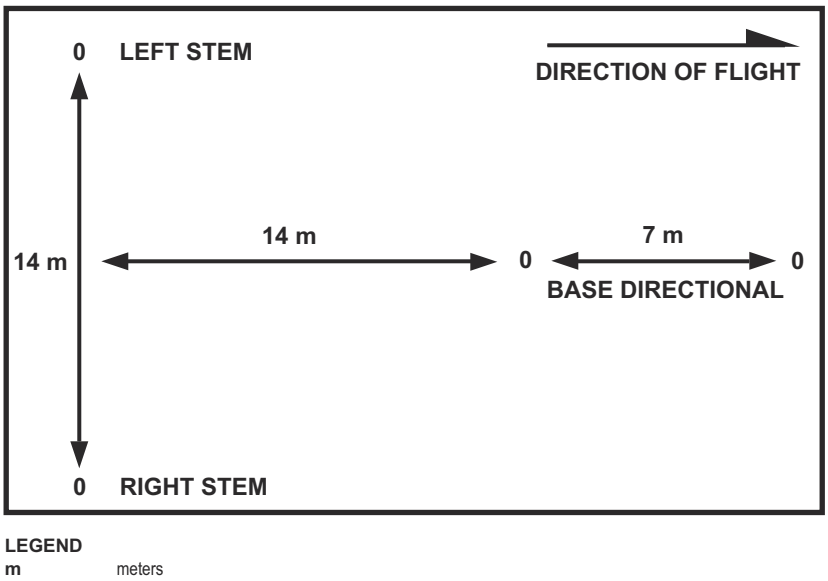


Figure 7-5. Marking Procedures for Pickup Zones/Landing Zones.

Marking Techniques

During the day, a ground guide marks the PZ or LZ for the lead aircraft using ITG procedures and techniques. (Refer to fig. 7-5.) This can be accomplished using a VS-17 air panel or by other easily identifiable means.

At night, the following are required:

- An inverted "Y" marks the landing point of the lead aircraft. (Refer to fig. 7-5).
- Chemical light sticks or IR strobe lights may be used to help maintain light discipline.
- Each additional aircraft that lands in the same LZ or PZ requires an additional light.
- For an observation, utility, or attack aircraft, the exact landing point is marked with a single light.
- For cargo aircraft (CH-47, CH-53, etc.) each additional landing point is marked with two lights. The two lights are placed 10 meters apart and aligned in the aircraft's direction of flight.

AIRBORNE OPERATIONS

Airborne operations offer the commander a highly mobile means of maneuver and are used to gain a tactical advantage over the enemy. Ground reconnaissance Marines can be inserted via parachute, gaining access to areas of the battlefield that would normally be inaccessible or extremely costly in time and personnel to penetrate. Parachutists can be inserted into areas of rough terrain or the water, where helicopter LZs would be impractical. Additionally, the clandestine nature of airborne operations offer a high probability of success in defeating an enemy air defense and detection system, detecting enemy improvised explosive or mine threats, and achieving surprise at the objective.

Ground reconnaissance units provide the Marine Corps' theater security cooperation (TSC) and combat parachuting capabilities. Tasked-organized Marine Corps ground reconnaissance elements plan, coordinate, and execute LLSL and MFF airborne operations via Navy ships or forward operating bases (FOBs) to conduct full-spectrum amphibious reconnaissance, ground reconnaissance, AFO, small unit resupply operations (TORDS), and, when tasked by the commander, specialized raid missions.

AIRBORNE INSERTION TECHNIQUES

The Marine Corps has two types of parachutist: the Airborne and Air Delivery Specialist (0451) and the Parachute Qualified Ground Reconnaissance Man (0323). Ground reconnaissance units conduct airborne operations from rotary- and fixed-wing aircraft using both LLSL and MFF parachuting methods over land or water DZs.

There are several different techniques employed during airborne operations. Each technique uses a variety of equipment and has many different applications. Each of these techniques has its own advantages, disadvantages, and criteria for use. Not all aircraft are capable of conducting all of the various techniques.

Military Free Fall Parachute Operations

Military free fall parachute operations are the Marine Corps' combat parachuting capability and are used when enemy air defense systems, terrain restrictions, or politically sensitive environments prevent low altitude penetration; when the mission requires a clandestine insertion; or when Marine Corps forces clearly have air superiority/air supremacy and want to capitalize that advantage. Military free fall parachute insertions are conducted using the Multi-Mission Parachute System (MMPS) or the TORDS. (For more information on MFF operations, refer to Technical Manual (TM), *USMC Military Freefall Operations*, 70244A-OI and MCO 3120.11, *Marine Corps Parachuting Policy and Program Administration*.)

The MMPS and TORDS are highly maneuverable parachute systems that have forward air speeds of 20 to 30 mph. The glide capabilities of these systems provide commanders the means to conduct standoff insertions into designated areas without having to physically fly over the

intended DZ. This process gives commanders the ability to keep high-value air assets and Marines outside the detection and threat ranges of enemy air defense systems or politically sensitive areas.

Military free fall parachuting allows ground reconnaissance Marines to deploy their parachutes manually or by static line at a predetermined altitude, assemble in the air, navigate under canopy, and land safely together as a tactical unit ready to execute their assigned mission. The use of the MMPS and TORDS parachutes can produce highly accurate and safe landing of personnel and their equipment within an objective area.

Military Free Fall Parachuting Qualifications. Training for MFF parachuting occurs primarily at the unit level. Basic MFF parachutists receive their initial training and qualification at the Multi-Mission Parachutist Course (MMPC) in Coolidge, Arizona. This training includes ground training, wind-tunnel training, packing and employment of the MMPS in its four configurations, use of supplemental oxygen, and 30 qualifying jumps from fixed-wing aircraft. (For more information on certification qualifications, see app. H.)

Types of Military Free Fall Operations. There are two types of basic MFF operations—HALO and HAHO. Personnel involved in either of these operations require extensive knowledge of meteorology and navigation. Training for these operations must be realistic and incorporate detailed planning and rehearsals. When used correctly, these insertion techniques give commanders a responsive and highly mobile means to maneuver ground reconnaissance forces to gain access to and influence the battlefield. These insertion methods are equally applicable across the full spectrum of operations conducted by ground reconnaissance units. All HALO and HAHO operations requiring the use of supplemental oxygen must be conducted in accordance with current US Air Force regulations for the High Altitude Airdrop Mission Support Program.

High-Altitude, Low-Opening. Military free fall jumps made with an exit altitude of up to 35,000 ft MSL [mean sea level] and a parachute deployment altitude at or below 6,000 ft AGL [above ground level]. The HALO insertions are the preferred MFF method of insertion when the enemy air defense posture is not a viable threat to the insertion platform. The HALO insertions require the insertion platform to fly within several kilometers of the intended DZ.

High-Altitude, High-Opening. Military free fall jumps employing standoff from the intended DZ made with an exit altitude of up to 35,000 ft MSL and a parachute deployment altitude at or greater than 6,000 ft AGL. The HAHO insertions are the preferred method of insertion when the enemy air defense threat is viable or when a low-signature insertion is required. The standoff gained from HAHO insertions provides commanders a means to drop MFF parachutists outside the air defense umbrella, where they can navigate under canopy to the DZ. The most important objective of a HAHO insertion is for the patrol members to land together, even if circumstances force the patrol to land in an area that might not have been the original DZ. Alternate DZs along the patrol's flight path must be planned that support the clandestine insertion and mission accomplishment.

Multi-Mission Parachute System

The MMPS was designed to be used as a standalone delivery system or in conjunction with the TORDS. The MMPS has a load carrying capacity of 450 lbs while using the standard main parachute canopy—the MP-360, and 400 lbs when using the high glide main parachute canopy—High Glide 380 (HG-380). The MMPS is configurable with four deployment systems using the

MP-360 main canopy: hand-deployed pilot chute (HDPC), self-set drogue (SSD), static line drogue (SLD), and double-bag static line (DBSL). Using the HG-380 main canopy, the MMPS is configurable with three deployment systems: SSD, SLD, and HDPC.

Hand-Deployed Pilot Chute. The parachutist throws the pilot chute out at the predetermined deployment altitude, beginning the parachute's deployment sequence. This configuration can be employed from any aircraft. In this configuration—

- Minimum exit altitude is 5,500 ft AGL; maximum exit altitude is 35,000 ft.
- Minimum opening altitude is 4,500 ft AGL; maximum opening altitude is 25,000 ft MSL.

Self-Set Drogue. This configuration uses a 54-inch drogue chute for combat equipment jumps that is manually deployed by the parachutist (self-set). This configuration can be employed from any aircraft. The minimum/maximum exit altitudes and minimum/maximum opening altitudes are the same as the HDPC and SLD configuration.

Static Line Drogue. This configuration uses a 54-inch drogue chute for combat equipment jumps that is deployed through the use of the static line drogue pouch. This configuration can only be employed by over the ramp operations from a C-130. The minimum/maximum exit altitudes and minimum/maximum opening altitudes are the same as the HDPC and SSD configurations.

Double-Bag Static Line. The DBSL begins deployment of the main parachute as soon as the parachutist clears the aircraft. This configuration can be employed from the UH-1, UH-60, HH-60, CH-46, CH-47, CH-53, MH-53, V-22, C-2A, CASA 212, and over the ramp C-130. In this configuration—

- Minimum exit altitude is 4,500 ft AGL; maximum exit altitude is 25,000 ft MSL.
- Minimum opening altitude is 4,500 ft AGL; maximum opening altitude is 25,000 ft MSL.

The MMPS may be jumped by non-MFF qualified parachutist in the DBSL configuration. The DBSL qualified parachutist must either be a graduate of the MMPC or the Multi-Mission Double-Bag Static Line Parachutist Course, Mobile Training Team (MTT) (CID: M02YF1M).

High Glide 380. When employing the MMPS, ground reconnaissance commanders have the option of replacing the MP-360 main parachute canopy with the HG-380 main parachute (also known as the special application parachute). Due to its higher glide ratio, the HG-380 is employed when greater standoff distance is required from a high altitude or to increase the offset distance if restricted to a lower exit altitude.

The HG-380 can be employed in the HDPC, SSD, and SLD configurations. Altitude restrictions for the special application parachute are—

- Minimum exit altitude is 5,500 ft AGL; maximum exit altitude is 25,000 ft MSL.
- Minimum opening altitude is 4,500 ft AGL; maximum opening altitude is 25,000 ft MSL.

Tandem Offset Resupply Delivery System

The TORDS provides the ground reconnaissance community with a parachute delivery system that can supply/resupply ground reconnaissance patrols with combat essential equipment or personnel. This system has a payload capacity in excess of 650 lbs. The TORDS comes complete with a passenger harness and a combat equipment rigging system that can be used on an assortment of loads up to 7 ft tall by 3 ft in diameter.

TORDS Equipment. The parachutist can pack mission essential gear into a variety of equipment containers approved for use with the TORDS. The equipment is then attached to the parachute harness using the Military Tandem Tethered Bundle (MTTB). The parachutist's total weight, including the parachutist, equipment being worn, combat equipment, weapons, and parachute system cannot exceed 650 lbs in training or 750 lbs in combat. Rigging procedures for the MTTB can be found in TM 10443B-12P, Military Tandem Tethered Bundle.

TORDS Personnel. The TORDS is designed to carry not only a tandem passenger, but also all weapons and combat equipment needed by the second parachutist.

Low-Level Static Line Parachute Operations

Low-level static line parachuting is an ideal medium for training because it is the simplest technique for conducting airborne operations. Ground reconnaissance platoons are most likely to conduct LLSL airborne insertion for initial platoon training, when operating in permissive environments, air-water operations, and TSC missions. For more information on LLSL operations, refer to MCWP 3-15.7, *Static Line Parachuting Techniques and Training*, and MCO 3120.11.

The LLSL operations allow for the insertion of a large number of personnel and quantities of supplies into small areas in a very short time. The LLSL insertion may be used for any operation not requiring secrecy or when air defense detection capabilities are very limited. Planning altitudes for LLSL drops are 1,200 ft AGL for fixed-wing aircraft and 1,500 ft AGL for rotary-wing aircraft.

Training for LLSL parachuting occurs primarily at the unit level. Basic parachutists receive their initial training and qualification at the US Army Basic Airborne Course in Fort Benning, Georgia. This training includes physical fitness, basic parachutist training, and five qualifying parachute jumps from fixed-wing aircraft.

The Basic Airborne Course instruction is taught on an individual basis and qualifies personnel to participate in LLSL parachute operations using US Army parachute equipment. Prior to using USMC-specific parachute equipment, basic parachutists are required to undergo documented, unit-level transition training as outlined in MCO 3120.11.

Proficiency and Requalification Requirements

Parachuting skills are perishable and require periodic sustainment training to maintain proficiency. Proficiency requirements are intended to sustain basic individual skills only, and not advanced individual skills or unit capabilities. For more information, refer to MCWP 3-15.7, TM 70244A-OI, and MCO 3120.11.

The airborne capability certification requirements provide a Service common standard to GCC and TSOCs regarding the combat parachuting capabilities that a ground reconnaissance unit possesses. Category I-III certifications exist as a method to express the capability that a ground reconnaissance unit possesses when task organized and supplied to a HHQ. The unit attains the required level of capability and then maintains that capability through repetition every 120 days. The certification expresses to the HHQ the unit's capability and produces a baseline from which risk assessment can be applied to decide risk versus gain in the employment of that capability. (For detailed information on certification categories, see app. H.)

AIRBORNE OPERATIONS PLANNING CONSIDERATIONS

Ground reconnaissance units must conduct a detailed mission analysis to determine an appropriate method of airborne insertion. Airborne operations provide many options to a commander to insert personnel into a designated AO. Airborne operations are ideally suited for, but not limited to, the insertion of operational elements, ground reconnaissance teams, pathfinders, raid assets, and personnel replacements conducting various missions across the operational continuum.

A thorough understanding of all the factors impacting airborne operations is essential to exploit this skill set to its full potential. For more information on airborne operations' planning considerations, refer to FM 3-05.210, MCWP 3-15.7 and TM 70244A-OI.

Transportation Available

The transportation means selected for the airborne operation depends on the specific needs of the mission. When selecting the transportation means, mission planners should consider the following:

- What type of aircraft meets the mission needs?
- What type of navigational system is in the aircraft?
- Are electronic countermeasures in place?
- What is the skill level of the aircrew?
- Is the aircraft dedicated to the supported unit?
- Is a backup aircraft designated and, if so, is it the same type?
- What are the range, altitude restrictions, and carrying capacity of the aircraft?
- What are the weather limitations?
- Does the aircraft possess aerial refueling capability?

Time Available for Preparation, Training, and Rehearsals

The amount of time available for the patrol to prepare and train for an insertion affects the method that they may use. A patrol should use an insertion technique that has the best chance of allowing undetected insertion if they have the amount of time needed to prepare for it.

Rehearsals are the best means for determining flaws in procedures or errors in planning. Mission planners must thoroughly coordinate all procedures to be used. When training, ground reconnaissance units should use the exact type of aircraft they will use for insertion, if possible. The unit's rehearsals should occur under terrain, astronomical, hydrographical, and meteorological conditions close to those seen in the AO.

Safety

The safety considerations for training missions and combat missions are different. During training, safety is the primary consideration for all operations. During combat, the commander may waive or change many of the safety regulations and requirements to fit the tactical situation. However, safety should still be an important consideration when planning an airborne operation. The operation is futile if a high percentage of the unit is incapacitated and unable to complete the mission.

Emergency Landings

Before a ground reconnaissance patrol boards the aircraft, the loadmaster or crew chief briefs emergency landing procedures. However, during combat operations, the inserting unit and aircrew must coordinate emergency landing procedures before then so everyone has a chance to become familiar with the procedures and to eliminate conflicts with unit SOPs. Although the exact actions for egressing the aircraft and assembling are standard, the actions immediately following will depend on where the aircraft has landed or crashed. The inserting unit and aircrew develop contingencies for landing or crashing in friendly-, neutral-, or enemy-controlled areas.

> *Note: After an emergency landing and depending on the situation, the ground reconnaissance patrol and the aircrew may have to initiate the evasion plan of action.*

En Route Evasion Plan of Action

A vital part of pre-mission planning is the development of a viable en route evasion plan of action (EPA). Such a plan enhances the survivability of the aircrew and the ground reconnaissance patrol in case of emergency evacuation of the aircraft over or in hostile areas. (For more information on en route evasion plans, refer to FM 3-05.210.)

Other Contingencies

The unit inserting and the supporting aviation unit should also plan for other contingencies. This planning should include, but is not limited to, ground delays; weather conditions; mission aborts or cancellations; early or late arrival at the DZ; and mission compromise.

Joint Mission Briefing

Face-to-face coordination between the ground reconnaissance patrol's OIC/SNCO in charge, jumpmaster, and aircrew takes place during the isolation phase of planning. This coordination is critical to ensure everyone knows exactly what is planned and expected. This briefing will take place before the backbrief to the commanding officer. This mission briefing consists of the following:

- At a minimum, the aircraft commander and the primary loadmaster/crew chief must attend.
- The aircraft's navigator should attend based on the desires of the aircraft commander.
- Inserting unit briefs the final insertion plan.
- Coordinate a time and place for the jumpmaster's pilot brief. During this brief, prior to loading the aircraft for insertion, the jumpmaster will brief any mission changes or updates from the commander's backbrief.

Parachutist's Rates of Descent

Ground reconnaissance Marines are carrying increasingly heavier combat equipment loads on airborne operations. The combination of heavier loads and less dense atmosphere at higher elevations causes a sharp increase in the jumper's rate of descent. The sharp rate of descent may cause unnecessary injuries. Commanding officers should not allow training with combat loads that cause the rate of descent of the jumper to exceed 22 feet per second. Other factors that unit commanders should consider when deciding the amount of equipment their Marines will carry on airborne operations are as follows:

- Forecasted winds affecting lateral speed (winds at altitude).
- Proficiency of parachutists.
- Air temperature (colder temperatures cause a faster rate of descent).
- Night operations (limited visibility conditions if night vision goggles [NVGs] are not used).
- Condition of the DZ.
- Altitude of the DZ.

For more information on rates of descent, refer to MCWP 3-15.7 and TM 70244A-OI.

AIRBORNE ORGANIZATION AND DUTIES

The assigned duties of personnel and units conducting airborne operations are to ensure interoperability with USSOCOM elements and to promote operational readiness and safety through a uniform execution of policy and training. (For further information on airborne operations, refer to MCWP 3-15.7, TM 70244A-OI, and MCO 3120.11.)

With the exception of Marine Corps personnel assigned to billets within USSOCOM, Marines are only authorized to attend approved formal parachuting-related courses of instruction, as reflected in the Marine Corps Training Information System, for qualification purposes.

Unit Types

The following Marine Corps unit types have a valid requirement to develop and maintain a viable parachuting capability to support prescribed missions and approved concepts of operations using equipment organic to the organization:

- Reconnaissance battalions.
- FORECON companies.

- Air delivery platoons.
- Radio reconnaissance platoons.
- Reserve component air naval gunfire liaison companies (commonly referred to as ANGLICO).
- Training and Education Command.
- Marine Corps Systems Command.
- Marine Forces Special Operations Command.

Reconnaissance battalions and FORECON companies provide forces with a platoon level parachuting capability to supported units. These airborne qualified platoons can be task-organized to provide the requisite number of maneuver forces required to accomplish an assigned mission.

Specific Duties

The US Army is designated by the DOD as the executive agent for military airborne operations. For information on assigned duties with regards to the planning and conduct of airborne operations specific to the Marine Corps, refer to MCWP 3-15.7, TM 70244A-OI, and MCO 3120.11.

AIRBORNE OPERATIONS PLANNING

For convenience, the planning of airborne operations is normally divided into LLSL, HALO, and HAHO operations. Marine Corps LLSL operations are conducted with the use of a steerable round parachute system and are normally associated with TSC missions. The HALO operations are conducted by MFF parachutists utilizing the MMPS. The HAHO operations are carried out by MFF parachutists or DBSL qualified parachutists using the MMPS or the HG-380. (For more information on airborne operations planning, refer to MCWP 3-15.7, TM 70244A-OI, MCO 3120.11, and FM 3-05.210.)

Equipment

The equipment that units and parachutists are allowed to purchase or use are specified in NAVSEA Instruction 13512.1_, *Premeditated Personnel Parachuting (P3) Equipment Authorized for Navy Use (ANU)*. Ground reconnaissance units can use this list to tailor their equipment purchases to more closely satisfy requirements unique to their particular environment or mission.

To be effective, each parachutist should be assigned equipment and protective clothing against the harsh environments where airborne operations are conducted and against the hazards inherent to parachuting. This equipment should be individually measured and fitted to provide the appropriate levels of safety and shelter. Protective equipment and clothing consisting of the following items are necessary to conduct airborne operations up to 25,000 ft AGL:

Equipment

- Parachutist helmet assembly capable of integrating radio communications, supplemental oxygen, and NVGs. Two separate helmet systems with mirrored capabilities, one offering ballistic protection and one offering bump protection.
- NVGs with dual image intensifier tubes.
- Eye protection for use with and without supplemental oxygen.
- Altimeter for MFF operations.
- Supplemental oxygen mask for HALO/HAHO operations.
- Navigation board integrated with a magnetic compass and GPS navigation system for HAHO operations.
- Hook knife.
- Parachutist's drop bag and equipment lowering harnesses.

Clothing

- Gloves.
- Boots.
- Lightweight undergarments.
- Insulated undergarments.
- Wet weather over-layer.
- Insulated over-layer.
- Hooded anorak.
- Face mask for use with and without supplemental oxygen.

This protective clothing allows the parachutist to choose the appropriate level of protection based on the air temperature, the expected level of exertion, and personal comfort. Semicustom protective clothing layers are the preferred solution because generic sizing does not provide an adequate range of sizes to fit and protect all jumpers in extremely cold or hot environments.

Commands may purchase off-the-shelf clothing from reputable manufacturers or commercial sources in accordance with guidance in the NAVSEA instruction 13512.1 to meet this requirement. After the clothing has been sized and issued to the parachutist, he is responsible for its use and maintenance. Due to issues such as individual sizing and personal hygiene, clothing items should not be swapped between jumpers.

Navigation

The success of any type of airborne operation is directly dependent upon the unit's ability to arrive at its objective. One of the most important factors in planning an airborne operation is computing the release point (RP).

The RP is the exact point over which the parachutists exit the aircraft. The jumpmaster locates the RP marker (terrain feature) in relation to the desired point of impact (PI) by using a backward planning sequence. The PI must be determined or known before locating the RP. To locate the RP,

the jumpmaster must know or compute three factors: dispersion, wind drift, and forward throw (refer to fig. 7-6).

Dispersion. The length of the pattern formed by the impact of the parachutists on the DZ. The PI for the first parachutist depends on how the calculated dispersal pattern fits into the available DZ space.

When considering the DZ selection, it may be necessary to compute the dispersion of the planned drop to ensure the DZ can support the operation in one pass. First, compute the ground dispersion pattern to determine the absolute minimum length of the DZ. This is the computed horizontal distance depending on and formed by the PI of the first parachutist to the impact point of the last jumper as determined by the known number of incoming jumpers. The dispersion pattern typically parallels the aircraft's line of flight.

Wind Drift. The horizontal distance a jumper will travel with the wind from the point of parachute opening through the descent to the PI on the DZ. The RP is located a calculated distance upwind from the PI. Computing the wind drift is the second step in determining the RP.

Forward Throw. The effect that inertia has on a falling object. When an object leaves an aircraft, it is traveling at a speed equal to the speed of the aircraft. The parachutist continues to move in the direction of flight until the dynamics of parachuting takes effect. The jumpmaster makes adjustments for this factor by moving the RP the appropriate distance in the direction of the

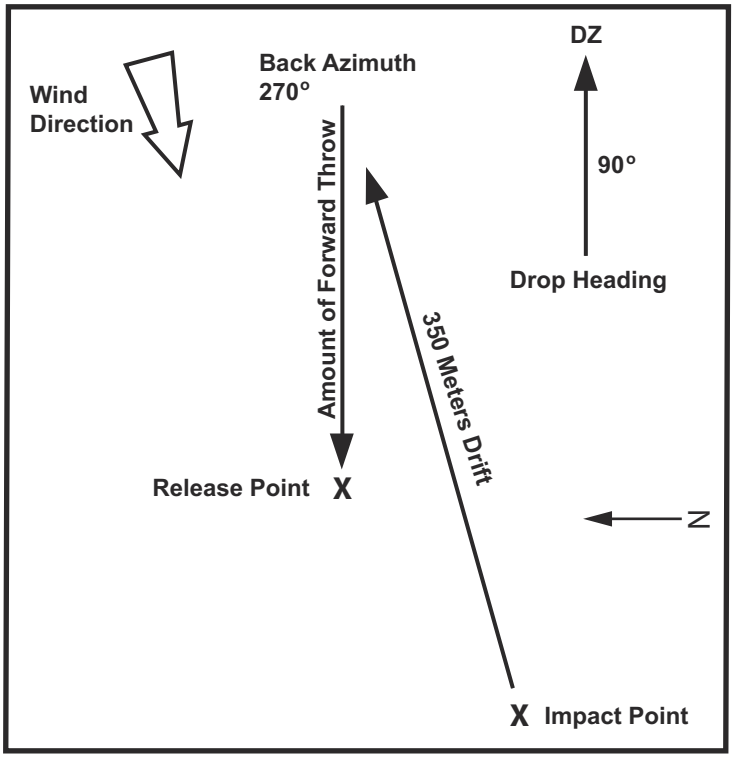


Figure 7-6. Release Point Calculation.

approach of the aircraft. The forward throw is usually a constant distance that is based on the type of aircraft and drop.

Low Visibility Airborne Operations

Night parachuting offers numerous tactical advantages, especially during the first quarter, new moon, and last quarter moon phases. Night airborne operations are the most psychologically demanding of all parachute operations. Extensive training must take place at night for the parachutist to develop confidence in both the equipment and personal capabilities. In planning night airborne operations, knowledge of the various moon phases and the light levels during each phase is necessary. Additionally, the moon phases influence the tides, which could influence planning for air-water operations.

Darkness greatly reduces both height and depth perception. This reduction in visual acuity can be hazardous to the parachutist. These hazards can be mitigated by employing illumination/lighting devices or NVGs.

Illumination/Lighting Devices. Commanders must weigh the tactical situation when placing lighting devices on the parachutist or parachute harness for safety and control. At a minimum, illumination devices will be used for altimeters and other instruments. Various night illumination techniques exist to identify parachutists, group leaders, or subunit elements while under canopy. These techniques include chemical and strobe lights.

Night Vision Goggles. These devices are used during airborne operations to reduce the risk of injury and enhance the parachutist's capabilities by increasing their visual situational awareness. The jumpmaster can use NVGs to assist while spotting from the aircraft. The parachutist can use NVGs to aid in navigation, grouping while under canopy, and during formation flying.

DROP ZONE SURVEYS

A DZ survey is required for all airborne training missions involving US personnel and equipment. Completing the DZ survey process involves a physical inspection of the DZ and documenting the DZ information on Air Force (AF) Form 3823, Drop Zone Survey. The using unit completes the DZ survey and forwards it through appropriate channels for review and approval.

The Assault Zone Availability Report (commonly referred to as AZAR) is a comprehensive database list of approved assault zones available for use by the DOD. Use of this report will expedite mission planning, enhance safety, and avoid duplication of surveys. Information contained in the Assault Zone Availability Report does not replace the need for a completed DZ survey before conducting airborne operations. For more information, refer to TM 70244A-OI and MCO 3120.11.

SPECIAL PURPOSE DROP ZONES

Special purpose DZs include, but are not limited to, rough terrain, open sea or water, high altitude, cold weather, and unfamiliar or unimproved areas. These airborne drops should closely duplicate conditions that could be encountered during operational missions.

Rough Terrain Drop Zones

The purpose of a rough terrain airborne operation is to parachute a patrol into an area that has no suitable LZ or DZ. It is a jump into an unprepared, mountainous, rocky, or wooded DZ. This technique minimizes terrain considerations and gives the commander maximum latitude in DZ selection. Rough terrain airborne insertion is not normally limited to favorable astronomical and weather conditions. When conducting rough terrain jumps, the following must be considered:

Environmental Protection

- Rough-terrain suit constructed of material resistant to penetration or tearing.
- Pliable attachable or detachable pads to protect vital body areas.
- A parachutist's helmet with face, eye, and maximum impact protection.
- Lowering device, 100- to 170-feet long, capable of lowering up to 360 lbs of equipment. This is METT-T dependent upon the height of trees surrounding or located on the intended DZ.
- Gloves that will protect the hands during the landing, allow the parachutist to maintain a firm grip on the equipment, and protect the hands when lowering to the ground.

Advantages

- Selection of DZ is less restrictive.
- The RP does not have to be very accurate. Accuracy can be difficult to achieve in a "feature-less" environment when employing aircraft that are incapable of computing a computed air release point insertion, such as Marine Corps rotary aircraft.

Disadvantages

- Extensive training of all parachutists is required.
- Injuries are more common.
- Additional time is required on the DZ to consolidate.
- There is more equipment to cache.
- Parachutes may not be able to be recovered, leaving signature of the patrol's presence.

Open Sea or Water Drop Zones

The purpose of an air-water parachute operation is to insert a patrol into an area that has no suitable LZ or DZ. It is a viable means of insertion using any of the static line or MFF techniques. The air-water operation can include the use of a special operations combat expendable platform (CEP) rigged to carry CRRCs or DPDs, greatly extending the parachutists' range once they enter the water. This technique minimizes terrain considerations and gives the commander maximum latitude in DZ selection. When conducting air-water parachute operations, the following subparagraphs address air-water parachute operational considerations.

Parachutist Recovery Boats. During training missions, the number of parachutists exiting the aircraft per pass will be limited to the number of parachutist recovery boats. One recovery boat for every three parachutists on the same pass is sufficient; however, individual unit SOPs may require more recovery boats. The boat coxswain cannot act as the DZ commander, safety swimmer, or corpsman.

Safety Swimmers. Safety swimmers must be a minimum water survival-instructor (WS-I) qualified. During training missions, a minimum of one safety swimmer is required to be onboard each recovery boat to recover personnel and equipment, and assist the parachutists as needed. Each safety swimmer must have fins, face mask, knife, and an inflatable life preserver. For night drops, each safety swimmer will have a light that is visible for one mile (chemical light) and an emergency light visible for three miles (strobe light). Safety swimmers cannot be assigned additional duties, such as DZ commander, boat coxswain, or corpsman.

Parachutist. Parachutists must be a minimum WS-I qualified before making an intentional water parachute drop.

Initial Water Jumps. Parachutists must have conducted water jump training at least 24 hours prior to the jump. Personnel must be current parachutists to conduct an initial water jump that must be made during the day and without combat equipment. When conducting the first night water jump, personnel must meet training requirements in accordance with unit SOPs.

Jumper Currency. Personnel who are not current can use a water jump for refresher training provided it is done during the day and without combat equipment. Parachutists conducting water parachute operations with combat equipment must be current and have previously made at least one noncombat equipment water jump. Equipment packs must be rigged to be positively buoyant in water. Equipment should be dip-tested for buoyancy before the jump.

Equipment. Parachutist must wear enough flotation to enable them to be positively buoyant in the water. If an injury occurs to the parachutist, he must be able to float without swimming. Each parachutist must carry the following equipment at a minimum for a water jump:

- Life preserver.
- Long-sleeved top or wet suit.
- Booties, coral shoes, jungle boots, or equivalent.
- Fins.
- Helmet. Helmets can be waived by the commanding officer based on operational requirements and a risk assessment.
- Knife and approved day/night flare.
- Chemical light and strobe light for night operations.

Drop Zone Requirements. The DZ must be established not less than 60 minutes before the jump operation to allow time for the DZ commander to monitor conditions. Drop zone requirements are as follows:

- *Surface Winds*. Shall not exceed 17 kt for static line operations and 18 kt for MFF operations.
- *Sea State*. Shall not exceed limits in accordance with unit SOPs.
- *Water Depth*. Must be at least 10 ft.
- *Water Temperature*. Minimum safe water temperature is 50 °F, unless an appropriate exposure suit is worn. Partial or full exposure suits should be considered whenever water temperature is below 72 °F.

High Altitude Drop Zones

Air density altitude is the factor which has the biggest effect on parachute flight characteristics. Therefore, planners must understand and plan to accommodate for the changes in canopy flight performance caused by atmospheric pressure (altitude), temperature, humidity, or their combined effects.

For example: A DZ can have an effective air density altitude that varies several thousand feet from the DZ's actual altitude at mean sea level. It is possible for a DZ physically located at 9,000 ft MSL to have an air density altitude which causes parachute flight characteristics comparable to those at 14,000 ft MSL. The following should be taken into consideration.

Air density altitude can degrade parachute performance characteristics such as opening shock, glide ratio, and landing flare effectiveness. Canopies become less efficient as lifting surfaces, especially with the higher suspended weights which accompany tandem bundles, combat equipment, or tandem pairs. Overall, parachute lift is degraded.

Air density decreases with an increase in altitude, temperature, or humidity. When all of these factors are combined (high altitude DZ on a hot, humid day) parachute performance is degraded to the point that a statistically significant number of parachutists can expect to have seriously hard (potentially injury producing) landings.

Air density altitude effects are tangible and are a key planning factor as low as 4,000 ft MSL. For round canopies and tandem bundles, operations above 4,000 ft MSL must carefully consider the effects of air density altitude.

An increase in wind velocity helps offset canopy performance degradation caused by higher density altitudes. Planners and jumpmasters should plan insertion times to capitalize on local weather conditions that best counter the effects of higher altitudes.

Air density altitude effect is also valid, but to a lesser degree, for oxygen altitudes which can contribute to the effects of hypoxia. For example: It is possible below 10,000 ft MSL to have an air density altitude of 13,000 ft MSL or greater in terms of symptoms of hypoxia. This is based on the air temperature locally reducing air density. This marginally less dense air contains a lower volume of oxygen molecules which means there is less oxygen available to the lungs. This effect is magnified when the jumper is physically exerting himself. This condition is usually manifested only after prolonged exposure (30 minutes or more) above this effective altitude.

Cold Weather Drop Zones

When using arctic rigging procedures, the number of personnel who can be parachuted from a single aircraft is reduced by the bulk of equipment and cold weather clothing. Aircraft compartment space required for a parachutist is 1.5 times more in cold regions than in temperate climates due to the bulkiness of added environmental protection and regional specific equipment. Airborne operations in cold weather environments place additional stress on the parachutist and his equipment. The parachutist is more likely to encounter physiological problems and cold weather injuries. Additionally, there is an increased possibility of equipment malfunction with altimeters, chemical lights, ejector snaps on equipment lowering lines, and compasses.

DISMOUNTED GROUND OPERATIONS

A ground reconnaissance unit should continually be actively searching for the enemy. Physically locating and keeping the enemy off balance is best accomplished by small ground reconnaissance patrols ranging in size from two men to a ground reconnaissance platoon.

To wage combat successfully, a commander must have accurate, detailed, and timely information about the enemy and the terrain as well as access to any geographical point on the battlefield. Well-trained ground reconnaissance Marines and capably led patrols are among the most effective means available to the commander for acquiring the information necessary to plan tactical actions and gain access to key areas for decisive exploitation of enemy weaknesses. The skills required by ground reconnaissance Marines to conduct effective ground operations include—

- Understanding the supported unit's concept of operations and TTP.
- Recognizing terrain.
- Reading a map and determining direction.
- Practicing and implementing the principles of cover and concealment.
- Fully utilizing movement and route selection.
- Knowing the enemy (estimate enemy unit, composition, and strength).
- Observing and reporting relevant information accurately.
- Selecting routes and moving through numerous types of terrain.

Foot Movement Operations

Most ground reconnaissance missions involve movement on foot in tactical operations. Ground reconnaissance units operating outside of friendly areas seek to avoid chance enemy contact. To avoid loss of surprise and initiative, casualties, and mission failure, ground reconnaissance units will normally—

- Move on covered and concealed routes.
- Avoid likely ambush sites and other danger areas.
- Practice camouflage, noise, and light discipline.
- Maintain all-around security.

- Make unavoidable enemy contact with the smallest enemy element possible.
- Retain the initiative to attack at a time and place of the ground reconnaissance unit's choice.

Planning Considerations

In planning the movement of a ground reconnaissance patrol, the patrol leader must consider all the elements of METT-T and determine how they will affect the patrol's movement. The following must be determined:

- The distance to and from the objective area must be considered, as well as the distance from the insertion point to the actual target. Ground reconnaissance patrols can move great distances over rugged terrain. However, this movement does require time and limits the patrol's ability to carry bulky (body armor) or sensitive equipment.
- Patrol formations.
- Security measures.
- Methods of command and control.
- Location of key leaders and weapons.
- Actions to be taken on chance enemy contact.
- The patrol can only carry enough supplies to move short distances for up to 96 hours. Since the patrol's supplies may be depleted once they arrive at the objective area, a resupply should be planned for every operation.

Contingencies

During the patrol, ground reconnaissance Marines must remain alert to avoid detection. The following are guidelines used when chance contact is made with an enemy force:

- A ground reconnaissance patrol does not fight en route to the objective unless there is no alternative. It will then quickly break contact.
- Should the patrol become aware of an enemy presence, it will try to move away without alerting the enemy and continue the mission.
- If the enemy does make contact, the patrol engages the enemy, trying to deceive them as to the size of the force and its direction of movement. After breaking contact, the patrol will report the contact to the ROC and continue its mission, unless directed otherwise.
- Ground reconnaissance patrols may need to establish temporary defensive positions for resupply, evacuation of wounded, planning, or extraction.
- If the ground reconnaissance patrol comes under indirect fire, it moves quickly out of the impact area and continues the mission.

Training and Self-Discipline

Precise and violent execution is how ground reconnaissance units win against enemy forces. All advantages must be exploited, discipline must be strict, and the following guidelines applied:

- No sleeping unless authorized by the patrol leader.
- No eating unless authorized by the patrol leader.
- No unnecessary talking. Every man is as quiet as possible, especially at night.

- No smoking.
- No excessive movement. The number of men moving at one time is closely controlled.
- Light discipline is rigidly enforced at night.

Camouflage

Each man must be hidden from the enemy. During the mission, each patrol member continuously conducts the following:

- Camouflages himself and his equipment.
- Secures equipment to prevent noise.
- Prepares individual and patrol positions with minimum change in the natural appearance of the site.
- Conceals all evidence of the patrol.

STAY-BEHIND OPERATIONS

A ground reconnaissance patrol can be positioned outside of friendly controlled areas by employing the stay-behind technique. In this method, ground reconnaissance patrols remain behind when friendly forces depart an objective area or allow themselves to be bypassed as enemy forces advance. This is done to allow the ground reconnaissance force to infiltrate an area or perform a specific mission.

Stay-behind operations may require the concealment or cache of supplies, or the patrol may need to use captured enemy supplies or equipment. The patrol must also have detailed plans for emergency extract, E&E, and periods of no communications.

MOUNTED GROUND OPERATIONS

When mounted, ground reconnaissance units can infiltrate an AOI over terrain consisting of high deserts with rugged mountains to low deserts with sand dunes and salt marshes. The capability of these units to travel unassisted long distances in areas not controlled by friendly forces gives the supported commander a viable cross-country asset capable of persistent information gathering and lethal battlespace shaping. (For more information, refer to the United States Special Operations Command [USSOCOM] *Combat Convoy Handbook*.)

Capabilities

In preparing for operations in the desert environment, planners often assume that the distance from the FOB to the AO is too great for dismounted insertion and infiltration. Several capabilities

inherent to ground reconnaissance units make them ideally suited for mounted operations; these include the ability to—

- Operate and communicate over long distances.
- Operate effectively and continually in a hostile air environment that may severely limit or prevent air support.
- Navigate and operate in rugged terrain, on and off road.
- Make on-site repairs of mobility assets using the skills of the patrol members and on-board tools and parts.

Mounted Operations

Mounted operations provide relatively rapid and secure operational assets within an operational theater. The mobility of mounted ground reconnaissance units expands the following ground operations:

- Raids.
- Reconnaissance or surveillance.
- Combat assessments.
- Security assessments of remote towns/villages.
- Target acquisition and hunter-killer operations.
- Combat support operations:
  - Resupply and cache missions.
  - Patrol insertion and extraction.
  - Communications relay.
  - Site security roles.
  - Assistance to evasion nets.
  - TRAP.

Advantages of Mounted Operations

Advantages of mounted operations are as follows:

- *Compatibility.* With SOF and other US mounted forces.
- *Mobility.* Mounted patrols can cover long distances rapidly, diminishing their reliance on aircraft for operational support.
- *Air Movement*. The patrol can use a variety of aircraft for air-land or airdrop operations.
- *Endurance*. Mounted patrols can persist in the field for extended periods without the need of being resupplied.
- *Transportation*. Mounted patrols can insert/extract specialized equipment and dismounted elements into the AO.
- *Firepower.* Mounted patrols can bring considerable firepower to bear on targets of opportunity or preplanned objectives using the weapons systems on their vehicles.

Disadvantages of Mounted Operations

Disadvantages of mounted operations are as follows:

- *Vehicle Maintenance*. Patrol personnel need to be skilled in maintenance and repair, including depot-level maintenance procedures. Patrols require additional tools and parts to sustain extended operations.
- *Training*. Patrol personnel will require additional training including mounted tactics; driving and navigational techniques; maintenance and repair; and vehicle camouflage.
- *Security*. The amount of security offered in an environment declines with the size of the element. The number of vehicles involved in the mission, the tracks they leave, and noise/light discipline will increase the possibility of detection.

MOUNTED OPERATIONS PLANNING CONSIDERATIONS

Planning and preparation for a mounted patrol starts long before the ground reconnaissance unit receives a WARNORD. Preparations include training and rehearsals of—

- Mounted immediate action drills.
- Laager and hide sites.
- Vehicle maintenance.
- Road and cross-country driving with and without the use of NVGs.
- Recovery operations.
- Use and care of mounted weapons systems.
- Vehicle navigation.

The distance from the FOB to the operational area may require additional transportation. Various insertion combinations of aircraft, rail lines, or surface ships may be required to get the mounted patrol positioned to insert into an operational area. These insertion combinations may also be used to increase the operational range of the mounted patrol by decreasing the required distance for overland insertion. When an operation requires the combination of an aircraft and surface ships or other combinations, a rendezvous must take place to transfer the patrol.

The method selected should be one that will land or position the element, with the least chance of detection, as close as possible to its AO, and as simply and rapidly as possible. Factors to consider include—

- Security.
- Size of the element.
- Operational requirements relating to the overt or clandestine nature of the mission.
- Capabilities of personnel and their equipment loads.
- Availability of transport and delivery capabilities.

- Weather, terrain, hydrographic, and astronomical data, and conditions in the delivery area.
- Enemy and friendly situation in the delivery area and AO.

Mission Planning

Mission planning ranges for a ground reconnaissance mounted patrol with a full combat load is 10 days or 1,000 miles without resupply. This planning range can be extended beyond 10 days or 1,000 miles if the unit is using trailers to carry more supplies (fuel, food, water), using an advanced operating base, or conducting resupply via caches or other means. Mission planning ranges are guidelines subject to METT-T conditions such as platform and environment. The following subparagraphs identify factors patrols must consider when planning for a mounted operation.

Mission. The mission determines what and how much ammunition and supplies are necessary.

Terrain and Weather. Terrain and weather affect route planning, personal equipment, and special equipment needs. Light conditions determine the time available for movement.

Time and Distance. Time and distance affect the amount of required fuel for the vehicles and subsistence for patrol members, since distance and duration are similar. Plan for —

- *Sufficient Fuel Supplies*. For example, a good planning figure for a high mobility multipurpose wheeled vehicle (HMMWV) is 9 miles per gallon for initial estimation of fuel requirements.
- *Adequate Water Supplies*. Minimum water planning figures are 4–6 quarts per man, per day for mounted operations in a desert environment. This planning factor does not include water carried on individual load-bearing equipment. Additional water must be taken when conducting dismounted missions within the mounted role. Patrol members should never use the water supplies on their load-bearing equipment unless separated from the vehicles during dismounted operations or when placed in a survival or evasion situation. As a rule, consume water from the vehicle's stores first before using personal stores.
- *Adequate Food Supplies*. Food consumption in hot, dry climates is generally less than in other climates. This planning factor does not include food carried on individual load-bearing equipment. Additional food must be taken when conducting dismounted missions within the mounted role. Patrol members should never use the food supplies on their load-bearing equipment unless separated from the vehicles during dismounted operations or when placed in a survival or evasion situation. As a rule, consume food from the vehicle's stores first before using personal stores.

Civilian Populace. Mission planning must consider the local civilians in the AO and what to do in case of mission compromise.

Vehicle Preparation

Ground reconnaissance units must plan for and spend sufficient time preparing their vehicles for the assigned mission, from insertion to extraction. They must be ready to conduct all maintenance and repair operations in the field environment.

A common mistake when using vehicles is to take "everything." Marines should take care to properly load and configure their vehicles for a long distance movement. Patrol members cross load each vehicle, so that if required, it can act independently during the mission.

Total weight of the vehicle, cargo, and personnel is a prime consideration during operations. An overloaded vehicle handles poorly, consumes fuel at a higher rate, and will experience more mechanical problems. Items having the greatest effect on weight are fuel, water, ammunition, and personal equipment.

Vehicle Inspections

An important aspect to mounted operations is vehicle maintenance and maintaining all equipment in a ready status. Ground reconnaissance Marines must constantly inspect and exercise their vehicles, especially between missions. Preventive maintenance checks and service are normally conducted, at a minimum, once a week. These inspections and tests should include on and off road operation in all gears, checking for wheel alignment and listening for any unusual noises.

The basic equipment common to all missions should be kept on the vehicle at all times. This equipment includes—

- Tools.
- Petroleum, oils, and lubricants (POL) to include: fuel, motor oil, transmission fluid, brake fluid, and antifreeze.
- Spare parts, such as: fan belts, upper and lower radiator hoses, radiator repair kit, main fuel tank drain plugs, automotive liquid metal, and assorted hose clamps.
- Recovery items.
- Tire repair kits.
- Food, water.
- Medical bags (inside of vehicle).

Each vehicle should be prepared using a unit standardized vehicle load plan compiled from unit SOPs, experience, and mission requirements. The unit vehicle load plan standardizes the location of equipment common to all in each vehicle. This ensures that anyone assigned to the unit can go to any vehicle and locate or pack patrol equipment. Leaders conduct inspections to ensure the vehicles are loaded properly.

FUNDAMENTALS OF MOVEMENT

Military vehicles leave a unique vehicle signature and their tracks are difficult to conceal. Attention to detail and extreme care must be exercised during route selection. When planning and

conducting mounted patrols, consider the following fundamentals to reduce the chance of enemy observations and contact:

- *Cover and Concealment*. Use terrain features and vegetation that offer protection from enemy observation.
- *Sky-lining*. Avoid sky-lining by selecting routes that avoid high ground that may silhouette the vehicles.
- *Chokepoints*. Avoid chokepoints or areas where the terrain naturally channels routes; these are often sites for ambushes or areas that the enemy may have under observation. If a chokepoint proves impossible to bypass, then reconnoiter it thoroughly before entering it.
- *Populated Areas*. Avoid known or suspected populated areas. For example, water holes in a desert environment are spots where enemy forces and civilian populations will gather.
- *Movement Discipline*. Practice movement discipline by adhering to light, noise, litter, and interval rules. Keep speed slow enough so that there is not a large dust signature, usually 10 to 12 mph on most surfaces at night and slower during the day.
- *Security*. Maintain 360-degree security at all times. Ensure that sectors of fire and observation are assigned for movement and during halts.

Methods of Travel

There are two methods of travel in the operational area either on an existing track, trail, or road, or cross-country travel. Both methods have their advantages and disadvantages. (See table 7-2.)

Table 7-2. Methods of Travel.

Tracks, Trails, or Roads	Cross-Country
Advantages Speed of movement. Quietness of movement. Less stress on vehicles and tires. Sometimes easier to navigate. Hard-packed surfaces that do not easily yield readable prints and signs of passage.	**Advantages** Less chance of enemy observation or contact. Usually provides more cover and concealment. Unpredictable route, less likely to encounter an ambush.
Disadvantages Greater chance of being seen or compromised. Natural lanes of observation and fields of fire for the enemy. Probable area for mechanical or manual ambushes. Military vehicles leave a distinctive trail unlike any other vehicle due to tire tread and wheel base.	**Disadvantages** Slower rates of movement. More noticeable vehicle tracks and signs of passage. Greater tire failure and vehicle stress. More difficult navigation. The patrol must rehearse cross-country movement in terrain as close as possible to that of the target area before deployment/insertion.

Movement Techniques and Formations

Movement techniques combined with movement formations allow units to conduct tactical movement in any METT-T situation. These techniques and formations can be used while dismounted, mounted, or a combination of both, thereby facilitating ease of transition between methods of employment.

Movement Techniques. There are three standard movement techniques. The selection of which technique to use is based on the likelihood of enemy contact:

- *Traveling*. Used when enemy contact is not expected or likely.
- *Traveling Overwatch*. Used when enemy contact is possible.
- *Bounding Overwatch*. Used when enemy contact is likely or expected.

Formations. A number of different movement formations can be used depending on the number of vehicles and the situation:

- *Column or Staggered Column*. Used when speed is essential.
- *Line Formation (Echelon)*. Used when maximum observation/firepower forward is needed.
- *Wedge and "V" Formations*. Used when immediate mutual support and depth is desired.
- *Diamond Formation*. Used when crossing extremely large open areas.

Camouflage

Ground reconnaissance patrols operating outside of friendly controlled areas need to stay undetected. The key to remaining undetected is to use proper camouflage measures. The patrol's ability to hide is limited only by the imagination and resourcefulness of its members.

Camouflage Theory. Regardless of the method of observation, certain factors help the eye and brain identify an object:

- *Position*. Relates to the position of the object in relation to its surroundings.
- *Shape*. People associate an object with its shape or outline. At a distance, the outline of objects can be recognized long before the details of its makeup can be determined.
- *Shadow*. Can be more revealing than the object itself, especially when observed from above.
- *Texture*. The relative smoothness or roughness of an object's surface and relates to an object's ability to reflect, absorb, and diffuse light.
- *Contrast*. Color is an aid to an observer when there is a contrast between the object and its background.
- *Movement*. Seldom reveals the identity of an object; however, it is the most important factor in revealing an object's location.

Concealment of an Object. Hiding is the concealment of an object by some form of physical screen:

- *Hiding*. Using thick vegetation or terrain features that screen vehicles from observation.
- *Blending*. Arranging or applying of camouflage materials on, over, or around an object so that it appears to be part of the background.
- *Disguising*. Simulating an object or activity so that it looks like something else.

MOBILITY PLATFORMS

Ground reconnaissance units use a variety of vehicles to support themselves when conducting operations. These vehicles allow the commander to rapidly employ ground reconnaissance patrols with reduced resupply requirements. These vehicles include HMMWVs, ATVs, internally transportable vehicles (ITVs), and nonstandard tactical vehicles.

The HMMWV is a good platform for conducting long-range raids, reconnaissance, surveillance, combat assessments, security assessments, target acquisition, and combat support operations. However, HMMWVs are difficult to transport via aircraft.

The ATV is a good platform for conducting short-range mounted reconnaissance, surveillance, combat assessments, and security assessments. The ATV provides the capability to conduct operations over a 48-hour period or 250-mile range (carrying extra fuel) without resupply in austere environments over difficult terrain. The ATV is easily transportable via aircraft.

The ITV is a good platform for conducting long-range mounted reconnaissance, surveillance, combat assessments, and security assessments. The ITV is also easily transportable via aircraft.

Nonstandard tactical vehicles come in a variety of configurations (e.g., four-door pickup trucks and sport utility vehicles) that allow excellent flexibility when operating in areas that limit the use of standard military vehicles. Although good platforms for conducting raids, reconnaissance, surveillance, security assessments, combat assessments, and target acquisition, they are difficult to transport via aircraft.

SPECIALIZED GROUND OPERATIONS

Mountains, jungles, deserts, urban areas, and winter conditions exist all over the world. Ground reconnaissance Marines must be prepared to gain access to the terrain and persist in the environment in every climate and place. The United States Marine Corps has waged small-scale operations to full combat operations in every one of these environments. This pattern will not change; therefore, ground reconnaissance Marines will fight and operate under these conditions again in the future. The detailed intelligence that these Marines provide about the proposed AO along with the up-to-date, near real-time information on routes, climate, and hydrology will greatly influence the commander's decisionmaking process. (For planning considerations and operational TTP for executing ground reconnaissance operations in these geographic environments, refer to app. I.)

Although operating in these environments has not changed, several advancements in equipment and transportation have been made that have increased Marines' capabilities. The helicopter and parachute now allow access to terrain that was once unreachable or could be reached only by slow, methodical climbing. Inclement weather and limited resources, however, may place various restrictions on these capabilities. The commander must possess ground reconnaissance forces with

the necessary skills to overcome adverse terrain, successfully maneuver within the battlespace, and reach the objective. These specialized skills include—

- River crossings.
- Negotiating glaciers.
- Operating and persisting in snow-covered mountains.
- Ice climbing.
- Rock climbing.
- Maneuvering through urban vertical environments.

CAPABILITIES

Ground reconnaissance Marines are subject matter experts in military considerations of the environment and terrain. Employing specialized forms of maneuver, they can gain access to and persevere in highly complex and compartmentalized terrain that is considered to be inaccessible to untrained Marines.

Employing TTP that enable enhanced movement, control of fires, intelligence gathering, and sustainment in exceedingly difficult environments allow ground reconnaissance Marines to advise and support the MAGTF, or elements thereof, in the conduct of their operations.

In order to attain this capability, ground reconnaissance Marines routinely conduct unit level training and school level training as outlined in table 7-3 on page 7-49.

Commanders must consider the effects terrain and weather will have on their operations, with a focus on their troops and logistics. Mountain operations require Marines to be physically fit and leaders to be experienced in planning and executing this type of operation. Acclimatization, conditioning, and training are important factors in successful military mountaineering. Ground reconnaissance units operating in mountainous terrain should become self-sufficient and be trained under various conditions.

Weather and terrain combine to challenge efforts of maneuver and persistence in mountainous environments. Commanders must be familiar with the restraints that the terrain can place on the unit as problems arise in moving men and transporting loads up and down steep and varied terrain. Spring storms, which may deposit a foot of snow on dry roads, combined with unprepared vehicles create hazardous situations. Helicopters are a valuable asset for use in moving men and supplies, but commanders should not plan to use them as the only means of maneuver and resupply. Alternate methods must be planned due to the variability of weather.

Table 7-3. Unit and School Level Skills Training.

Assault climber skills	
Communications in all environments and climates	
Tactical rope suspension techniques	Top roping and rappelling Stream crossing High- and low-angle rescue techniques
High-angle marksmanship	Range estimation, slope, and angle determination Effects of vertical and angular distortion Effects of elevation Effects on weapons and ammunition in extreme temperatures
Planning and conduct of medical operations in any environment and climate	Diagnosing, preventing, and treating high altitude, cold weather, and hot weather illnesses and injuries Techniques for transporting casualties with and without vehicles or air support: -In the snow -With pack animals -During mountain, desert, jungle, and amphibious operations
Survival techniques to prevail in all environments and climates (all seasons)	Expedient fires Shelters Signaling devices Procurement of food and water Survival navigation Avalanche avoidance and survival

Military Mountaineering

Military mountaineering includes the necessary skills to plan, organize, and lead patrols in a mountain environment. Ground reconnaissance Marines receive advanced mountaineering training from the Summer Mountain Leaders Course and the Winter Mountain Leaders Course at the Mountain Warfare Training Center in Bridgeport, California. For more information on military mountaineering, refer to MCWP 3-35.1, *Mountain Warfare Operations*.

Over-the-Snow Mobility

Ground reconnaissance Marines must be experts, to a degree, in cold weather operations on ice and snow covered terrain to gain access to operational areas. Over-the-snow mobility includes snowshoeing, military skiing, snowmobiling, and skijoring. Each of these platforms offers its own unique advantages and disadvantages:

- *Snowshoes*. Terrain would dictate the use of snowshoes. Utilize snowshoes to break trails.
  - Advantages: It requires no expertise. Only a small amount of equipment needed.
  - Disadvantages: Difficulty of movement on moderate slopes and through thick or cut off brush. Impedes quick movement.

- *Military Skiing*. Similar to cross-country skiing, Marines use skis and poles to propel themselves across snow covered terrain.
  - Advantages: The rate of movement.
  - Disadvantages: Requires extensive time to become proficient and maintain proficiency.
- *Snowmobile*. A land vehicle designed for winter travel.
  - Advantages: Machines can operate in deep snow, forests, open terrain, frozen lakes, and do not require roads or trails. Able to carry extra payload with the addition of a trailer.
  - Disadvantages: Noise and exposure due to not being enclosed. Fuel and maintenance considerations.
- *Skijoring*. Skiers being pulled behind a snowmobile or other small motorized vehicle.
  - Advantages: High rate of mobility with limited number of vehicle assets. Saves dismount/embark time during insertions and extractions.
  - Disadvantages: Requires extensive time to become proficient and maintain proficiency. Exposure due to not being enclosed.

Pack Animals

Ground reconnaissance units employ military pack animals, both mounted (riding them) and dismounted (guiding them), when the AO restricts normal methods of transport or resupply. Animal transport systems can greatly increase mission success when hostile elements and conditions require the movement of combat troops and equipment by foot. When used correctly, pack animal operations give ground reconnaissance Marines another means of gaining and maintaining access to the battlefield.

With conditioned animals, proper equipment, and moderately trained personnel, the pack train can move effectively and efficiently in the most difficult of environments. The weight bearing capacity of pack animals allows ground elements to travel longer distances with less personal fatigue.

The ground reconnaissance patrol, without trail preparation, can traverse steep grades and heavily wooded areas while maintaining acceptable speeds over terrain that is not mountainous, with the animals carrying loads up to 35 percent of their body maximum 150 to 300 lbs. This capability continues indefinitely as long as the animals receive proper care and feed. In mountainous terrain, the mule or horse can travel from 20 to 30 miles per day, without a reduction in payload.

Initial training in the conduct of pack animal operations takes place in the Animal Packers Course at the Mountain Warfare Training Center in Bridgeport, California. For more information, refer to FM 3-05.213, *Special Forces Use of Pack Animals*.

CHAPTER 8
COMMUNICATIONS

A secure and robust communications system gives the commander the means to exercise authority and direct forces over large geographic areas. A communications system that provides connectivity throughout the AO is vital to planning, conducting, and sustaining operations.

Ground reconnaissance communication systems must be mission-tailored to the projected operational environment. They must be tailored based on an analysis of the mission, threat, information-transfer requirements, and the operational environment. The deployed ground reconnaissance unit must have a variety of methods for communicating, reporting, and querying available resources, regardless of their geographic location.

NETWORKS

Communication and information systems are any systems whose primary functions are to collect, process, or exchange information. The fundamental requirement is to provide the MAGTF commander with a reliable, secure, fast, and flexible communication networks. These systems facilitate information flow throughout the MAGTF and provide shared situational awareness, informed decisionmaking, and rapid dissemination of decisions. The success of the MAGTF in the modern battlespace depends on the effective employment of CIS.

Ground reconnaissance units use several communication networks simultaneously. For example, the ROC communicates to the SARCC, HHQ, adjacent units, and deployed patrols concurrently. For more information on CIS, refer to MCWP 3-40.3, *MAGTF Communications System,* and MCRP 3-40B.

Architecture Management

Ground reconnaissance units have sophisticated and powerful communications equipment. This equipment allows the units to send and receive near-real time information over many types of digital and analog systems. Use of these systems requires access to multiple frequencies in multiple spectrums.

Every maneuver element within a ground reconnaissance unit will need frequencies in the HF, VHF, and UHF spectrums. Ground reconnaissance units need multiple high frequencies for HF radio systems due to the ever changing optimum frequency of transmission. Ground reconnaissance units need multiple frequency assignments for automatic link-establishment and 3G radios.

Frequency Management

The complexity of ground reconnaissance communications requires extensive frequency management. The unit's S-6 and/or communications chief is responsible for requesting frequencies from the division S-6 or MEF G-6 and JTF, when applicable, to ensure that the unit's maneuver elements are allocated a sufficient number and type of frequencies to accomplish the mission.

RECONNAISSANCE OPERATIONS CENTER

The ROC will establish and maintain four primary networks and two backup networks for communications. (Refer to figures 8-1 through 8-3 on pages 8-3 and 8-4.)

Primary Networks

Primary networks include—

- Internal wire net with a tactical switching system (landline telephone).
- Tactical LAN for communication via computer or voice over internet protocol phones.
- Blue Force Tracker.
- Combat net radios such as HF radio, UHF TACSAT radio, and secure cellular/satellite phones.
- VHF is a primary network between maneuver elements only due to the distance between employed ground reconnaissance patrols and the ROC. This is METT-T dependent and subject to change with the mission.

Backup Networks

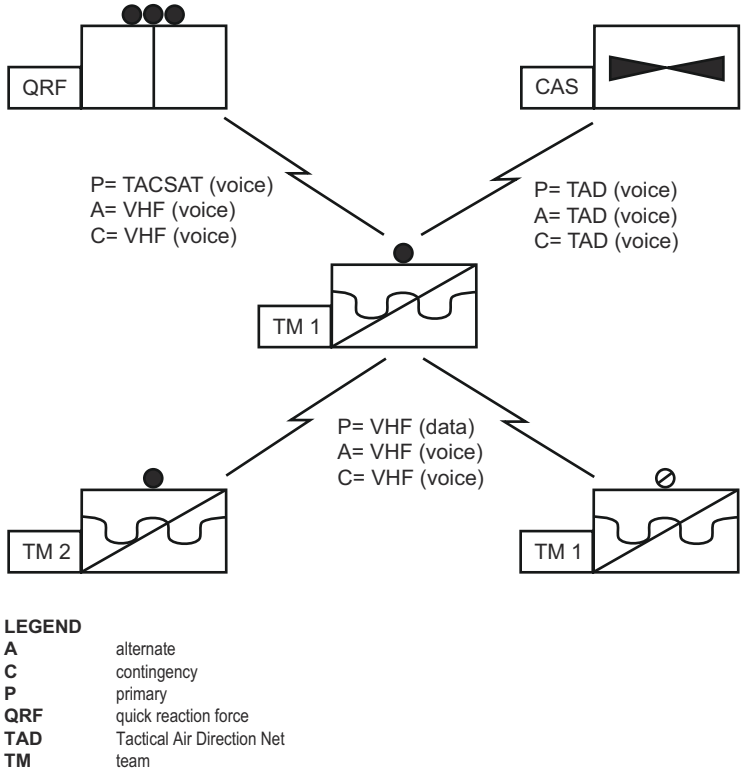
Backup networks include combat net radios: Single-channel ground and airborne radio system (SINCGARS) and multipurpose and multiband inter/intra team radio.

Ground Reconnaissance Platoons

For internal communications, ground reconnaissance patrols use secure LOS, combat net radio systems. These systems are secure, handheld, waterproof, lightweight radios (such as the multipurpose and multiband inter/intra team radio) that incorporate frequency hopping, embedded COMSEC, and data transfer that are compatible with SINCGARS. These radios allow communications with other Marine Corps and joint elements, including aircraft.

RADIOS

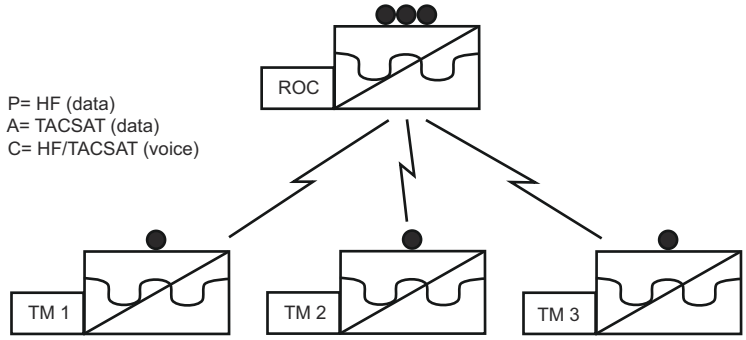
Ground reconnaissance units that gain access to an AO, collect valuable information and then cannot report this information are a wasted resource and become a liability to the commander. The ability to communicate is the life blood of a ground reconnaissance patrol and their communications equipment is what makes this possible.



LEGEND

A	alternate
C	contingency
P	primary
QRF	quick reaction force
TAD	Tactical Air Direction Net
TM	team

Figure 8-1. Team to Team Reconnaissance Communications Architecture.



LEGEND

A	alternate
C	contingency
P	primary
TM	team

Figure 8-2. Team to ROC Reconnaissance Communications Architecture

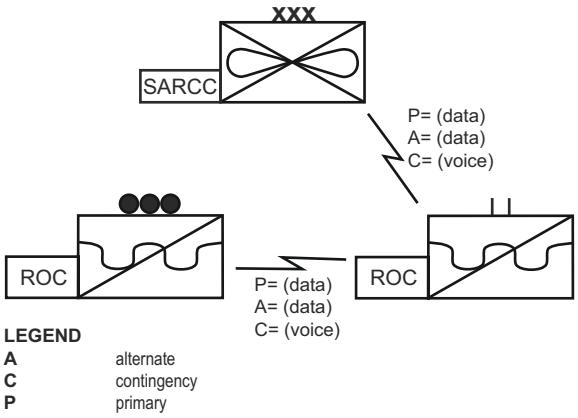


Figure 8-3. ROC to HHQ Reconnaissance Communications Architecture.

Ground reconnaissance Marines must be experts in the use of multiple radio systems and in the three primary military radio frequency spectrums—HF, VHF, and UHF. Additionally, these Marines must be highly proficient in programming, troubleshooting, and maintaining many types of radios and their associated equipment.

Elements of Success

Successful communications depend on several factors that include, but are not limited to, the following:

- Type of emission.
- Amount of transmitter power output.
- Characteristics of the transmitter antenna.
- Amount of propagation path loss.
- Characteristics of the receiving antenna.
- Amount of noise received.
- Relative sensitivity and selectivity of the receiver.
- An approved and robust list of usable frequencies within a selected frequency range.

(For more information, refer to MCRP 3-40B.)

HF, VHF, and UHF Radios

These three radio wave spectrums combine to provide the primary and alternate means for ground reconnaissance units to effectively communicate on the battlefield.

In addition to communicating with many other types of digital and analog equipment, ground reconnaissance patrols are required to use equipment that communicates beyond LOS. Ground reconnaissance Marines must be experts in the use of HF and TACSAT systems. However, only HF allows long-range communications without the use of terrestrial or satellite relays. Refer to table 8-1, on page 8-5, for range characteristics vs. frequency bands.

Table 8-1. Frequency Bands and Range Characteristics.

Band	Ground Wave Range	Sky Wave Range	Power Required
HF	0-50 miles	100-8,000 miles	.5–5 kW
VHF	0-30 miles	50-150 miles	.5 or less kW
UHF	0-50 miles	N/A	.5 or less kW

Regardless of the frequency spectrum, ground reconnaissance patrols can transmit either secure voice or data. (For more information, refer to MCRP 3-40B and FM 3-05.160, Army Special Operations Forces Communications Systems.)

HF Radios. High frequency radios are more difficult to maintain than the commonly used LOS radios. However, they provide an unbeatable combination of reliability, economy, transportability, and versatility.

Under ideal conditions, a HF radio using only 20 watts of transmitter power can successfully communicate over thousands of miles. Knowledgeable operators, backed by well-designed antennas and by propagation predictions from a propagation-engineering service, are key to successful HF radio system performance. Modern HF radios, such as the AN/PRC-150, incorporating the technologies of automatic link establishment (commonly referred to as ALE), link quality analysis, embedded COMSEC, and digital modems are ideal for ground reconnaissance operations. These radios simplify HF communications and increase reliability and interoperability.

VHF Radios. Very high frequency radios are generally simple to use and provide reliable and clear, short-range tactical communications. The SINCGARS series of radios provide tactical units with excellent communications that are easy to secure.

UHF Radios. Ultra high frequency radios provide reliable tactical LOS, operational, and strategic communications. However, due to the high demand and potential interoperability problems with other units, the primary means of communications for ground reconnaissance units remains HF radio.

Primary, Alternate, and Contingency Radio Frequencies

The ROC maintains long-range communications with employed ground reconnaissance patrols using HF and UHF TACSAT radios. (For more information, refer to MCRP 3-40B and FM 3-05.160.)

Single Platoon Operations. The communications chief must carefully design HF networks utilizing automatic link establishment and 3G. To ensure network reliability, the communications chief must analyze in detail the number of employed patrols and establish communication windows for each patrol taking into consideration the availability of frequencies, distances between stations, and the configurations of the radio sets. Since automatic link establishment and 3G-capable radios automatically choose the best frequency for a particular radio path, separate day and night channel groups should be programmed to speed link establishment.

Multiple Platoon Operations. When employing multiple platoons during company or battalion level operations, each platoon should be provided separate frequencies. However, due to ever-changing ionosphere conditions and competition with external organizations for frequencies, platoons may have to share frequencies, which is not optimal. If multiple platoons must share frequencies, the ROC should set up primary and alternate frequencies. These primary and alternate frequencies are used for scheduled communications traffic during patrols' respective communication windows.

Contingency Operations. During all operations, the ROC should establish a guard frequency to be used by patrols outside of their communication window for priority traffic to report "Flash Traffic" such as ISR tasks, and to request extraction, fire support, and/or CASEVAC.

Fundamentals

Ground reconnaissance communicators transmit important information over multiple radio systems and must continually adjust to changing METT-T conditions. Successful communications depends on their fundamental communications knowledge listed in table 8-2. (For more information, refer to MCRP 3-40B and FM 3-05.160.)

Table 8-2. Fundamental Communications Knowledge.

Knowledge of:	Which Includes:
Basic Components of Radio Equipment	Transmitter
	Power supply
	Transmission lines
	Transmission antenna
	Propagation path
	Receiving antenna
	Receiver
Radio Waves	Propagation velocity
	Wavelength
	Radio frequencies
Radio Propagation:	Direct wave
1.Ground Wave Propagation	Ground reflected wave
	Surface wave
2.Sky Wave Propagation	Ionosphere structure
	Factors affecting the ionosphere
	Transmission paths
	Maximum usable and lowest usable frequencies
Field Expedient Antennas	Selection of best antenna
	Selection of best antenna site
	Proper antenna construction
	Affects of terrain and weather

MAGTF SECONDARY IMAGERY DISSEMINATION SYSTEM

The MSIDS provides organic tactical digital imagery collection, transmission, and receiving capability to the MAGTF commander. The MSIDS is comprised of components necessary to capture, manipulate, annotate, transmit, and receive images in near-real time.

Operational Impact

The MSIDS provides ground reconnaissance Marines with a self-contained, hand-held system that delivers ground-perspective imagery that is essential for a supported unit's mission planning and intelligence. The MSIDS allows ground reconnaissance Marines to capture imperative, detailed imagery depicting individuals, equipment, and structures from the ground level. The detailed images fill the gaps created by other MAGTF near real-time imaging systems that provide only overhead imagery.

Concept of Employment

Ground reconnaissance units employ the MSIDS in the following manner:

- *Planning*. Ground reconnaissance patrols use the components and organic software in MSIDS to plan and produce products such as WARNORDs, patrol orders, and route overlays.
- *Command and Control*. Ground reconnaissance units use the MSIDS in the ROC to exercise command by transmitting and receiving data to/from ground reconnaissance patrols and maintain battlefield situational awareness.
- *During Operations*. Ground reconnaissance patrols capture images of a targeted threat or item/AOI from a ground perspective using one of the system's digital or video cameras. Images are then loaded into the system's ruggedized computer, connected to an organic radio, and transmitted to higher or adjacent units. Intelligence sections edit photos and videos, create and brief the intelligence products. These images provide mission planners greater situational awareness, and can aid in their planning process.

The employment of this capability should change as technology changes to ensure that the MSIDS provide ground reconnaissance units with an effective means of planning, command and control, disseminating information, and controlling fire support assets.

This will require an equipping process to take advantage of rapidly emerging technologies, to support the ground reconnaissance patrol's ability to persist in the environment, collect information requirements, and protect the force. Additionally, MSIDS should provide for the latest sensor capabilities, communications equipment, and targeting equipment.

OPERATIONS

The C2 environment is characterized by rapid change and continuous challenge. Implementation of maneuver warfare doctrine, with its emphasis on speed and tempo, demands compressed planning, decisionmaking, execution, and assessment cycles.

At the same time, the volume of information that needs to be processed and analyzed to support decisionmaking is ever increasing and threatens to overwhelm commanders and their staffs. The ROC must employ its limited communications system resources to meet these challenges and get the right information, to the right people, at the right time.

Reconnaissance Operations Center

The ROC is the primary link between deployed ground reconnaissance patrols and the COC. The ROC is normally located in the security umbrella of the supported unit. Ideally, it is located close enough to the supported unit's SARCC and COC to permit a land wire network to both for reporting purposes.

When space permits, the ROC should be physically located with or in close proximity to the supported unit's COC. This allows a direct link between the representatives from the ROC and the supported unit's SARCC. If circumstances prohibit the colocation of the ROC, the supported unit's COC, and the SARCC, they will all be linked via VHF, HF, UHF TACSAT, tactical LAN, field wire, or a combination.

Site Selection

The reliability of radio communications depends largely on proper radio site selection. The site needs to be free of interference (manmade or natural) as well as good cover and concealment. Moving the site may become necessary if interference becomes a problem. Common sources of interference include high-tension power lines, over-population of antennas, electronic countermeasures, thick vegetation, and terrain.

The ground reconnaissance unit commander and the communications chief must ensure that both a primary and alternate site is selected that satisfy technical performance requirements, METT-T tactical considerations, and security.

Reconnaissance Operations Center, Forward

The ROC, forward (FWD) relays communications between deployed ground reconnaissance patrols and the supported unit's COC. When the ROC FWD is employed, it serves as the primary reporting link from the ground reconnaissance patrols to HHQ. The ROC FWD must maintain a constant communication path with the supported unit's COC.

Due to variables of terrain, distance, interference, and other METT-T considerations, a ROC FWD can be established. The ROC FWD is positioned closer to the deployed ground reconnaissance patrols than the supported unit's COC. The ROC FWD can operate either mounted or dismounted.

The ground reconnaissance commander, the communications chief, and the supported unit commander determine the approximate distance and location of the ROC FWD based on the mission and other factors. These other factors can include the probability of communications with the deployed ground reconnaissance patrols and HHQ and available local support or supported unit's capability to support the ROC FWD. Also, force protection is a factor in that individual ground reconnaissance patrols must be prepared to establish and maintain communications with HHQ should the ROC FWD become destroyed or unable to accomplish its primary mission of relaying communications.

REPORTS

The purpose of report formats is to provide information in a standardized format within or between units. Standardized formats simplify and speed the accurate, timely flow of reports from information collectors to information analysts. Formats help to minimize confusion and assist the generation of tempo. In modern warfare, one can expect to conduct operations as part of a joint or allied/coalition force; this makes the disciplined use of accepted formats a requirement. For more information, refer to MCRP 2-25A.

Communication Windows

Ground reconnaissance patrols communicate with the ROC at specified times or per designated communication windows. Each ground reconnaissance team will have a separate reporting window. The ground reconnaissance unit commander and the communications chief should give in-depth thought when establishing communication windows.

To accomplish their mission, ground reconnaissance patrols must send *timely* and *accurate* reports, properly formatted, to the ROC. Each patrol sends these reports during assigned "windows," based on METT-T considerations. Using too frequent windows raises susceptibility to enemy interception and direction-finding capabilities. Additionally, ground reconnaissance patrols should plan periods when they will intentionally miss their window, during movement for example, so that communications do not hinder other aspects of the patrol. Using too few windows reduces the relevance and usefulness of time-sensitive information.

Messages and Reports

To ensure interoperability and standardization in products, ground reconnaissance units use reconnaissance report formats. These formats ensure each ground reconnaissance patrol produces the same information, facilitates S-2/G-2 analysis of reconnaissance products, and guarantees that supported commanders know what to expect from the ground reconnaissance units they employ. These formats can be found in MCRP 2-25A.

Each ground reconnaissance patrol and the ROC will log, in detail, all message traffic and reports they send and receive. The unit SOP will specify how this is accomplished. The patrol communicator and the ROC communications chief ensure that all message traffic and reports are properly formatted and that permission has been received from the patrol leader or ground reconnaissance commander before sending.

Incoming Reports/Messages. When the ROC receives a report from a deployed ground reconnaissance patrol, it is logged, transcribed from the report format into a storyboard, and forwarded to the SARCC. Received reports are not delayed within the ROC; it is imperative reports are quickly transcribed and forwarded.

Outgoing Messages. Regardless of a message's origin, whether it is from the SARCC or COC, all outgoing message traffic to deployed ground reconnaissance patrols will originate from the ROC. The ROC formats and encrypts, as necessary, the message traffic going out to deployed ground reconnaissance patrols. The ground reconnaissance commander and the ROC communications

chief will ensure that the message is accurate and formatted correctly. The message traffic will be sent to the intended patrol(s) during their next scheduled communications window.

Brevity Words/Prowords

Brevity words and prowords are used by transmitting stations to send vital information quickly and in a secure manner, typically by voice. The brevity words/prowords are given to the ground reconnaissance patrol during the planning process from the ground reconnaissance unit commander or communications chief. (Refer to table 8-3.)

Brevity words and prowords keep radio transmissions short while informing the receiving station of the situation on the ground. Used to send vital information in a secure manner, the meaning of the message will be unknown to any intercepting station or person without the knowledge of the code words.

Table 8-3. Example Brevity Words/Prowords.

Code Word	Net	From	To	Event
Kick Off	TACSAT	Patrol	ROC	Insert complete
First Down	TACSAT	Patrol	ROC	OP established
End Zone	TACSAT	Patrol	ROC	Link up at objective complete
Game Over	TACSAT	Patrol	ROC	At extract
ROLEX	TACSAT	ROC	Patrol	Time change (+)/(-)
Penalty	TACSAT	Patrol	ROC	Abort mission
Off Sides	TACSAT	Patrol	ROC	Request emergency extract
Special Teams	TACSAT	Patrol	ROC	Launch QRF
Punt	TACSAT	Patrol	ROC	Passive compromise
Fumble	TACSAT	Patrol	ROC	Planned linkup did not occur
Hail Mary	TACSAT	Patrol	ROC	Request CASEVAC
Compromise	TACSAT	Patrol	ROC	Active compromise
Marathon	TACSAT	ROC	Patrol	PatrolExecute EPA

Report Format

Information is placed into a report format that aids encryption, decryption, and information recognition. Using a report format makes even partially received messages useful, because the information is more recognizable. A report format is divided into three parts. (Refer to fig. 8-4 on page 8-11.)

Header Information. Messages are numbered in sequence of transmission. The first alphanumeric set is the team number, followed by the report type, and then the sequential number.

Report names will be in the following format: company designation, platoon number, team number, report type, and sequential number. For example: if Bravo company, 4th platoon, team 1 is sending their first SALUTE report of the operation, the naming convention would be: B41SALUTEREP001. Subsequent reports will be labeled as B41SALUTEREP002, B41SALUTEREP003, and so on.

The second part to the header information is identification of the individual who wrote the report. Each member of a ground reconnaissance patrol is assigned a unique number identification called a "kill number." This number will be placed below the report name so that the report's author can be contacted later if more information is required.

Message Body. The message body varies depending on the report format. Recipients must be able to recognize, understand, and react quickly to the information contained in the report. Short, standard message language provides observer guidance, speed, and COMSEC.

Grid Locations. The grid location of the object(s) reported on will include the grid zone designation, the 100,000-meter square identification, and at least an eight-digit grid location. For example, the grid location will be written as follows: 41S MS 1234 6789.

Date-Time Group. The DTG will be in the following format: day, time actions reported occurred (including time zone designator based on Greenwich Mean Time [GMT]), month, and two digit year. For example: if an action occurred on 1 January 2000 at 1200 on Central European Time, the DTG would be as follows: 011200AJAN00.

Patrol Status. A patrol reports its commodities and personnel status, usually provided in a situation report (SITREP). They will use color codes to describe their percentage of readiness. For example: green is 75 to 100 percent; yellow is 50 to 75 percent; and red is 50 percent or below. Color codes are applicable to—

- Food and water.
- Ammunition, demolitions, and pyrotechnics by type.
- Batteries by type.
- Fuel.
- Patrol members.

HEADER INFORMATION	B41SALUTEREP001 1-1
MESSAGE BODY	Line 1: (2) MILITARY AGE MALES Line 2: ATB CONDUCTING DISMOUNTED SECURITY PATROL Line 3: 41S MS12345 67890 Line 4: UNK Line 5: 011200AJAN00 Line 6: GRN WOODLAND CAMOUFLAGE UNIFORM, GRN WOODLAND CAMOUFLAGE BOONIE COVER, BLACK BOOTS, M-4 CARBINE W/ ATB ACOG SITE
FOOTER INFORMATION	REMARKS: PATROL ATB WALKING A PREDETERMINED PATROL ROUTE, WALKING EAST-WEST AT A SLOW PACE. WEAPONS WERE SLUNG AND THEY WERE TALKING. THEY WERE NOT WEARING ANY LOAD-BEARING EQUIPMENT OR BACKPACKS. DID NOT ATB VER ALERT. THEY ATB WELL FED AND IN GOOD PHYSICAL CONDITION. REFER TO B41-1C001.

Figure 8-4. Report Format.

The report format gives the observer a tool to report specific information. Knowing the format speeds the writing and reading of the message. Keeping messages short decreases transmission time and helps avoid enemy radio direction finding units.

Footer Information. This section, better known as "remarks," is a required portion for every report. The remarks are a summary of follow-on information used to capture information not relevant in other portions of the report and/or as an intelligence assessment on information reported in the format.

Use remarks for narrative updates, corrections to previous reports, and to amplify information on other report formats or capture information not previously reported. Remarks also link reports together. For example, linking a picture to a Helicopter Landing Zone Report.

Data File Naming Conventions

The data file naming convention is particularly important. The manner in which a file is named when it is being saved will aid the patrol's communicator and the ROC's communications chief when the reports are being logged. This becomes paramount when the reports must be located for future reference. All electronic files and pictures must be labeled prior to being transmitted.

Reports are sequentially numbered within their specific type. Following the naming scheme as outlined in figure 8-5, on 8-13, will ensure that these files are located together and in order, when stored in an electronic folder.

IMAGERY COLLECTION AND TRANSMISSION

The timely and accurate collection and transmission of imagery, video, or hand-drawn pictures of the objective, plays a key role in the success of follow-on missions. The purpose of imagery collection and transmission is to provide an accurate description of enemy strengths, positions, and capabilities so that the commander can make informed decisions.

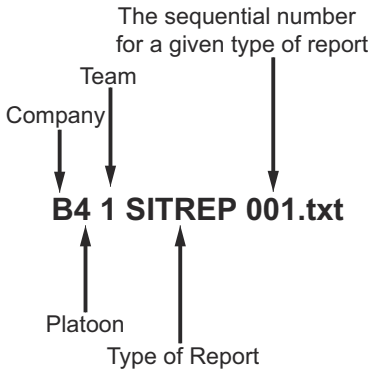
With the introduction of new technology and integration between digital cameras, GPS devices, laser range-finding equipment, and other electronic devices, it is now easier and of more tactical value to take digital imagery of objectives. The use of a digital camera with laser range-finding equipment and GPS helps to produce clear, real-time information.

Imagery Labels

All personnel serving in a ground reconnaissance unit should be familiar with and proficient at creating digital imagery and labeling it. Standardized digital imagery facilitates analysis of ground reconnaissance products across the MAGTF.

Analysts, supported units, and commanders should know what to expect from ground reconnaissance products and understand how to read them; this is accomplished through well-known ground reconnaissance SOPs implemented during missions throughout the MAGTF.

B41SITREP001.txt (For the first SITREP)
B41SITREP002.txt (For the second SITREP)
B41PIC001.jpg (For the first picture)
B41PIC001.txt (For the first picture's photo log)



Report Type	File Naming Scheme
Contact Report	B41CONREP001.txt
Spot Report	B41SPOTREP001.txt
Situation Report	B41SITREP001.txt
Photo	B41PIC001.jpg
Photo Log	B41PIC001.txt
Salute Report	B41SALUTEREP001.txt

Figure 8-5. Data File Naming Convention.

Ground reconnaissance digital imagery labeling includes the following (refer to figs. 8-6 through 8-11 on pages 8-14 through 8-16):

- North seeking arrow.
- The image naming convention is composed in the following manner: grid location of the object in the picture, DTG, picture name, and unit name.
  - The grid location of the object(s) in the picture. The grid location will include the Grid Zone Designation, the 100,000 meter-square identification, and the 10-digit grid location. For example, the grid location will be written as follows: 41S MS 12345 67890.
  - The DTG will be in the following format: day, time picture was taken (including time zone designator based on Greenwich Mean Time [GMT]), month, and two-digit year. For example, if a picture was taken on 1 January 2000 at 1200 on Central European Time, the DTG would be 011200AJAN00. (See fig. 8-6 and fig. 8-7.)
  - The picture name is a short description detailing the subject of the picture. For example, if the picture is of a burning armored HMMWV, the picture name might be "Burning UAH." (See fig. 8-8 and fig. 8-9.)
  - Unit name will be in the following format: Unit call sign, platoon number, team number, and picture number. For example: If Bravo company, 4th platoon, team 1 is sending their first picture during the operation, the naming convention would be: B41PIC001. Subsequent pictures will be labeled as B41PIC002, B41PIC003, and so on.
- Placing appropriate arrows, graphics, and letters or numbers where needed. Caution should be taken not to cover too much of the image and take away from the information provided by the picture. All arrows, graphics, letters, or numbers on the image need to correspond with the photo log and have their meaning further explained in detail. (See fig. 8-10 and fig. 8-11.)

N 41S MS 09876 54321 011200AJAN00 IED EMPLACERS B41PICOO1
(ARROW) (GRID LOCATION) (DTG) (PIC NAME) (UNIT NAME)

Figure 8-6. Picture of an Objective.

B41PIC001 Photolog

KILL NUMBER 1-1

A. SUBJECT OF PHOTO
IED EMPLACERS

B. AZIMUTH AND DISTANCE TO TGT FROM PHOTOGRAPHER AND PHOTOGRAPHER'S GRID (10 DIGIT)
270 MAGNETIC, 500 METERS, 41S MS 09876 54321

C. DATE TIME GROUP FOR WHEN PHOTO WAS TAKEN
011200AJAN00

D. KILL NUMBER FOR WHO TOOK THE PHOTO
1-5

E. DESCRIPTION OF WHERE THE PHOTO WAS TAKEN FROM
PHOTO WAS TAKEN FROM THE OP LOCATED AT 41S MS 09876 54321

REMARKS

PHOTO TAKEN WITH:

CAMERA	CANNON 30 D
WHAT LENS	400MM
F STOP	4.5
ISO	100
EXPOSURE	1/16 SEC

HOW WAS THE CAMERA HELD (TRIPOD, HANDHELD, ETC...) HAND HELD

A.) THREE MAN IED TEAM. THREE MAN TEAM EMPLACED ATB IED. REFERENCE B41HUTSREP001-003.
B.) LOCATION OF SUSPECTED IED EMPLACEMENT. REFERENCE B41SALUTEREP003 AND B41IEDREP002.

Figure 8-7. B41PIC001 Photo Log.

Figure 8-8. Picture for Battle Damage Assessment of Enemy Action.

B41PIC001 Photolog

KILL NUMBER 1-1

A. SUBJECT OF PHOTO

BURNING UAH

B. AZIMUTH AND DISTANCE TO TGT FROM PHOTOGRAPHER AND PHOTOGRAPHER'S GRID (10 digit)

270 MAGNETIC, 100 METERS, 41S MS 12345 67890

C. DATE TIME GROUP FOR WHEN PHOTO WAS TAKEN

011200AJAN00

D. KILL NUMBER FOR WHO TOOK THE PHOTO

1-5

E. DESCRIPTION OF WHERE THE PHOTO WAS TAKEN FROM

PHOTO WAS TAKEN FROM THE GUNNERS POSITION ON THE LAST UAH IN CONVOY

REMARKS

PHOTO TAKEN WITH:

CAMERA	CANNON 30 D
WHAT LENS	400MM
F STOP	4.5
ISO	100
EXPOSURE	1/16 SEC

HOW WAS THE CAMERA HELD (TRIPOD, HANDHELD, ETC...) HAND HELD

VEHICLE CAUGHT FIRE AS A RESULT OF IED BLAST. REFERENCE B41IEDREP001

Figure 8-9. B41PIC002 Photo Log.

N 41S MS 12345 67890 011200AJAN00 PANORAMIC OF AFGHAN TOWN B41PIC003

Figure 8-10. Panoramic PIcture of Objective Area.

B41PIC001 Photolog

KILL NUMBER 1-1

A. SUBJECT OF PHOTO

AFGHAN TOWN OF SHE GOSA

B. AZIMUTH AND DISTANCE TO TGT FROM PHOTOGRAPHER AND PHOTOGRAPHER'S GRID (10 DIGIT)

300 DEG MAG, 1200 METERS, 41S MS 12345 67890

C. DATE TIME GROUP FOR WHEN PHOTO WAS TAKEN

011200AJAN00

D. KILL NUMBER FOR WHO TOOK THE PHOTO

1-5

E. DESCRIPTION OF WHERE THE PHOTO WAS TAKEN FROM

PHOTO WAS TAKEN FROM HIDE WITH CAMO NETS SCREENING THE LENS

REMARKS

PHOTO TAKEN WITH:

CAMERA	CANNON 30 D
WHAT LENS	400MM
F STOP	4.5
ISO	200
EXPOSURE	1/32 SEC

HOW WAS THE CAMERA HELD (TRIPOD, HANDHELD, ETC...) TRIPOD W/ MANFROTTO GRIPPOD

LEFT LIMIT OF PANO IS 240 DEG MAG, RIGHT LIMIT IS 320 DEC MAG. ROAD IS 840 METERS FROM HIDE AT CLOSEST POINT AND 1300 AT THE RIGHT AND LEFT LATERAL LIMITS. THERE ATB DEAD SPACE PARALLELING THE ROAD THAT IS NOT APPARENT IN THIS PHOTO. FIRST ACTIVITY BEGAN IN THE VILLAGE AT 0623, REF B41SALUTEREP001

Figure 8-11. B41PIC003 Photo Log.

Image Gathering Equipment

There are many types of cameras and video cameras available. The majority of this equipment becomes quickly dated, so it is important to stay proficient with the most current equipment.

Cameras. Several different types of cameras may be used to gather imagery from an objective. When selecting the type of camera, the basic principles that should be considered to use are durability, waterproof, and weight and size measurements. The film type, memory stick, or compact flash card, as well as the number of images that can be stored at a particular resolution should also be considered.

Video Cameras. The introduction of the video camera recorder (a camera capable of taking video and still images) has aided the ground reconnaissance community in its ability to record information. Considerations for video camera use include: zoom ability, quality and resolution, battery life, and power converter for military batteries (BA 5590).

Compression Software. The use of compression software can greatly enhance the effectiveness of a unit when it comes to gathering and transmitting imagery and video. Compression software allows compression of files up to 88 percent smaller than the original file. Being able to compress files aids in decreasing the amount of time required to transmit.

OBJECTIVE SKETCHES

In the cases of communications loss, enemy compromise, or a hasty link up and data dump with friendly forces, an objective sketch may be the only visual graphic of the objective available. The ability to draft a proper sketch is an extremely important skill. It is important to understand the basics of objective sketch production. Understanding the basics allow a novice or non-artist to draw an understandable objective sketch.

An objective sketch pad is an expedient tool to capture the information. Sketches are most easily drawn on printed objective sketch pads showing all useful information. The pads include reminders of what specific information should be placed in the objective sketch. The sketch pad includes marginal information and remarks (see fig. 8-12 on page 8-18).

Types of Objective Sketches

There are two different types of sketches—panoramic and military overhead—used by ground reconnaissance Marines.

- *Panoramic Sketches*. Represent an area or object, and are drawn to scale from the observer's perspective. They provide useful ways to record details about specific areas or structures (see fig. 8-13 on page 8-18).
- *Military Overhead Sketches*. Represent large areas drawn to scale as seen from above. They show reliable distances and azimuths between major features. A military sketch can also be used as on overlay on a range card (see fig. 8-14 on page 8-19).

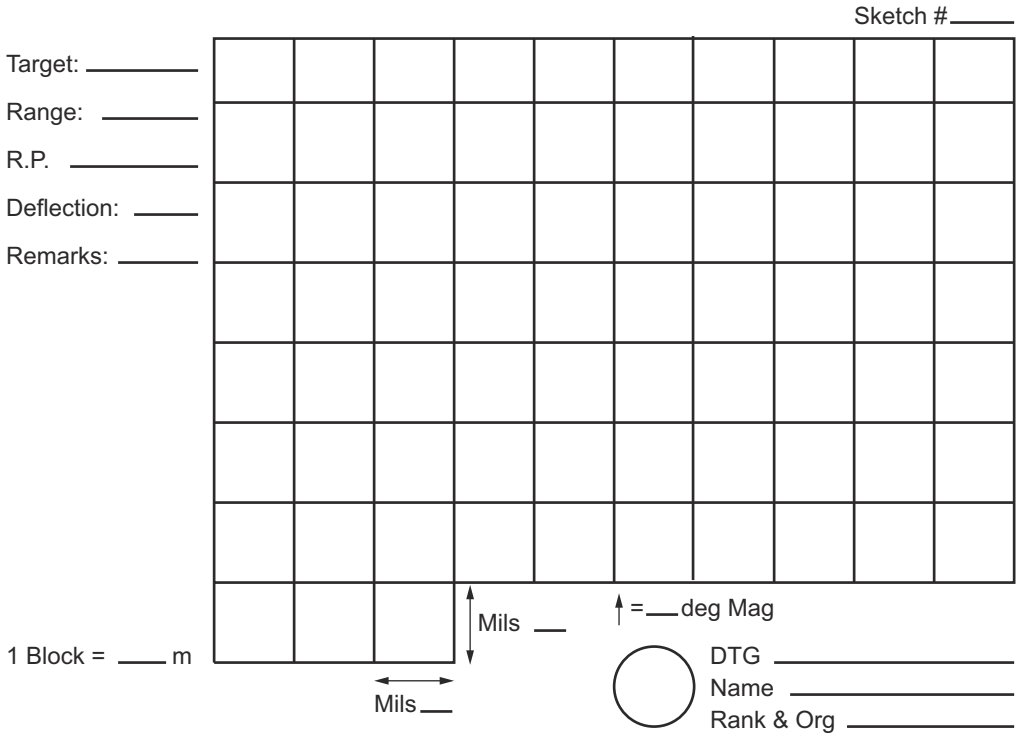


Figure 8-12. Objective Sketch Pad.

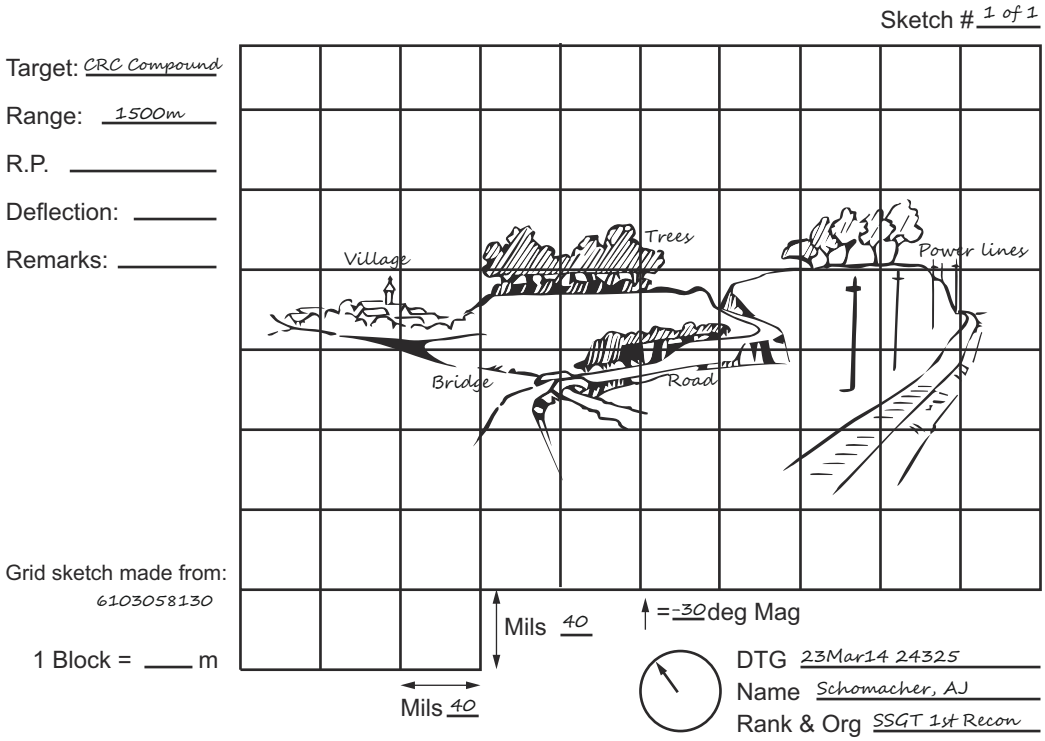


Figure 8-13. Panoramic Sketch.

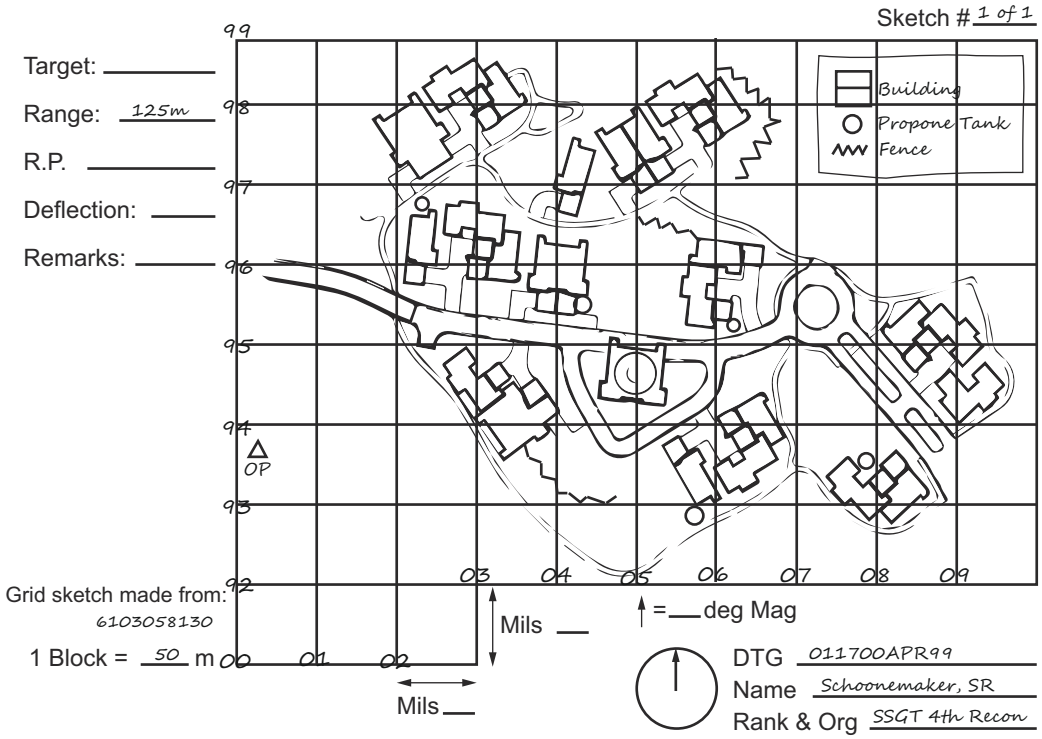


Figure 8-14. Military Overhead Sketch.

Information Contained Within an Objective Sketch

Information common to all sketches includes—

- Target number.
- Range from the preparer to the objective.
- Reference point, that is, the point of origin.
- Deflection angle from the preparer to the objective.
- Grid coordinates for the objective.
- Block scale (the size of the blocks printed or drawn on the sketch pad).
- Magnetic azimuth from the preparer to the objective.
- Sketch number.
- DTG when sketch was prepared.
- Name, rank, and unit of the preparer.
- Remarks including—
  - Terrain on the objective.
  - Vegetation in terms of cover and concealment.
  - Structural composition at the objective (e.g., brick, mud, wood).
  - Tactical value of the objective (e.g., prison camp, training camp, communications site).
  - Additional information of tactical relevance, includes—
  - Are the buildings elevated?

– Are windows covered with screens?
– Where are the power lines located?
– Are there building numbers?
– Any information that might help the commander to plan follow-on missions.

ELECTRONIC WARFARE

Electronic warfare is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. There are three major subdivisions within EW: electronic attack, EW support, and electronic protection.

Electronic attack involves the use of electromagnetic energy, directed energy, or anti-radiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires.

Electronic warfare support involves actions tasked by, or under the direct control of, an operational commander to search for, intercept, identify, locate, or localize sources of intentional or unintentional radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning, and conduct of future operations.

Electronic protection involves passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of EW that degrade, neutralize, or destroy friendly combat capability. Ground reconnaissance units are primarily concerned with electronic protection.

For more information, refer to MCRP 3-40B and FM 3-05.160.

Methods of Prevention

Ground reconnaissance units use emission, transmission, and physical security measures to prevent or reduce the effectiveness of enemy EW and enhance electronic protection:

Emission Security

- Using brevity and prowords.
- Masking antenna locations.
- Using directional antennas.
- Using the lowest possible output power.

Transmission Security

- Using voice communication only when essential.
- Developing and using brevity and prowords.
- Minimizing transmission time.
- Planning messages and using report formats.
- Encrypting messages and reports.

Physical Security

- Establishing a comprehensive and workable plan for the destruction of sensitive material and equipment.
- Identifying to all patrol members where sensitive materials and equipment are located within a patrol.

Operating Procedures in an Electronic Warfare Environment

These following procedures apply when encountering interference, jamming, or deception in an EW environment:

- Remain calm and continue to operate as if nothing unusual is happening.
- Prevent the enemy from knowing if their jamming is successful or detected.
- Switch to a higher power on the radio.
- Reorient the antenna to the receiving station.
- Report the activity using a Meaconing, Intrusion, Jamming, and Interference Report (commonly referred to as MIJIREP).
- Use an alternate frequency until communications can be established and maintained over the primary frequency.

GEOGRAPHIC ENVIRONMENTS

Climatic variations such as temperature, electricity, humidity, and wind require deviations in the way radios and antennas are set up, used, and maintained. (For more information refer to MCRP 3-40B and FM 3-05.160.)

Desert Operations

The factors that most affect radios and antennas in the desert are—

- Poor electrical grounding.
- Temperature.
- Humidity extremes.
- Wind-blown contaminants.

Jungle Operations

Communications in jungle areas must be carefully planned and address the following:

- Thick jungle growth vertically polarizes radio frequency energy, which reduces transmission ranges.
- Heat and humidity increase maintenance problems.
- The location of the communications site is the most important factor in the jungle, followed closely by maintenance.

Cold Weather Operations

In very cold weather, storms in the ionosphere and night lights, such as the Aurora Borealis, can degrade sky-wave propagation and disable radio communications. For example—

- Changes in the density and height of the ionosphere can fade a signal for weeks.
- Static can block frequencies for extended periods.
- When and where the disturbances will occur are difficult to predict.

Deep snow and permafrost may have the following effects:

- Radio grounding and antenna installation may be impossible.
- Frozen ground conducts electricity too poorly to propagate ground waves well.
- Radios and other communications equipment must be protected from the snow. All radio equipment and power units must be properly winterized to operate in extreme cold.
- Snow can freeze to dials and knobs as well as blow into the wiring causing short circuits.
- All cords and cables must be handled carefully because they will lose their flexibility in extreme cold.

Mountain Operations

Operations in mountainous areas present many of the same problems as operations in northern or cold weather areas. For example—

- Terrain restrictions often make relay stations necessary for good communications. Selecting good transmission sites is a critical task.
- Terrain obstacles often make LOS transmission necessary.
- Dirt and soil in mountainous environments usually do not conduct electricity well.
- Mountain climates require flexible maintenance planning.

Urban Operations

Communications in urban terrain pose special problems. Some problems are similar to those encountered in mountainous environments. For example—

- Obstacles can block transmission paths.
- Pavement surfaces conduct electricity poorly.
- Commercial power lines cause electrical interference.
- VHF radios are generally less effective in urban environments because they require LOS between antennas.
- HF and UHF radios require and rely on LOS less than VHF radios because they use different operating frequencies and transmit at higher power.

CHAPTER 9
INTELLIGENCE OPERATIONS AND REPORTING DISSEMINATION

Intelligence is knowledge of the battlespace and of the threat forces in that battlespace. Knowledge is generated in support of the commander's decisionmaking process and is the result of the collection, processing, exploitation, evaluation, integration, analysis, and interpretation of available information about the battlespace and threat. Intelligence has two objectives:

- To reduce uncertainty by providing accurate, timely, and relevant knowledge about the threat and the surrounding environment.
- To assist in protecting friendly forces.

For more information on intelligence operations, refer to MCDP 2, *Intelligence*; MCWP 2-1; and MCWP 2-3, *MAGTF Intelligence Production and Analysis*.

FUNDAMENTALS

Uncertainty pervades the battlespace; it is a fundamental attribute of war. First and foremost, intelligence should support the commander's decisionmaking process by reducing uncertainty about the hostile situation. Intelligence should accomplish the following actions to achieve this objective.

- Identify and evaluate existing conditions and capabilities.
- On the basis of those existing conditions and capabilities, estimate possible COAs and provide insight into possible future actions.
- Aid in identifying friendly critical vulnerabilities that the threat may exploit.
- Assist in developing and evaluating friendly COAs.

The fog and friction of war will never allow the commander to have a perfect picture of the battlespace; intelligence cannot provide absolute certainty. It attempts to reduce the uncertainty facing the commander to a reasonable level by collecting relevant information, placing it in context to provide knowledge, and conveying it in the form of images to enhance understanding.

Information and Intelligence

Intelligence is not simply another term for information. Intelligence is more than an element of data or a group of information; it is a body of knowledge. Knowledge occupies a unique place in

the information hierarchy, which is a framework to distinguish between various classes of information. (Refer to fig. 9-1.)

Giving a commander every piece of data without providing meaning can increase uncertainty by overloading the commander with incomplete, contradictory, or irrelevant information. To be intelligence, data must be placed in context to provide an accurate and meaningful image of the hostile situation. Intelligence is developed by analyzing and synthesizing (combining) data and information to produce knowledge about the threat and the environment. The commander combines this knowledge with awareness of the friendly situation and employs experience, judgment, and intuition to understand the situation. The commander then applies this understanding to decisionmaking.

Data

Intelligence information (information used to generate intelligence) is commonly drawn from three types of data: intelligence data, sensor data, and combat data:

- *Intelligence Data*. Derived from assets primarily dedicated to intelligence collection. These assets include imagery systems (e.g., MSIDS), electronic intercept equipment, and HUMINT sources, such as ground reconnaissance Marines.
- *Sensor Data*. Derived from sensors whose primary mission is surveillance or target acquisition. These assets include air surveillance radar, counterbattery radar, and remote ground sensors emplaced by ground reconnaissance or GSP Marines.
- *Combat Data*. Derived from reporting by operational units. Due to its highly perishable or critical nature, combat data and sensor data are sometimes used to affect decisions without being converted into intelligence. Although the demands of the ongoing battle may require rapid action, decisions based on raw, unprocessed data or single pieces of data should be avoided.

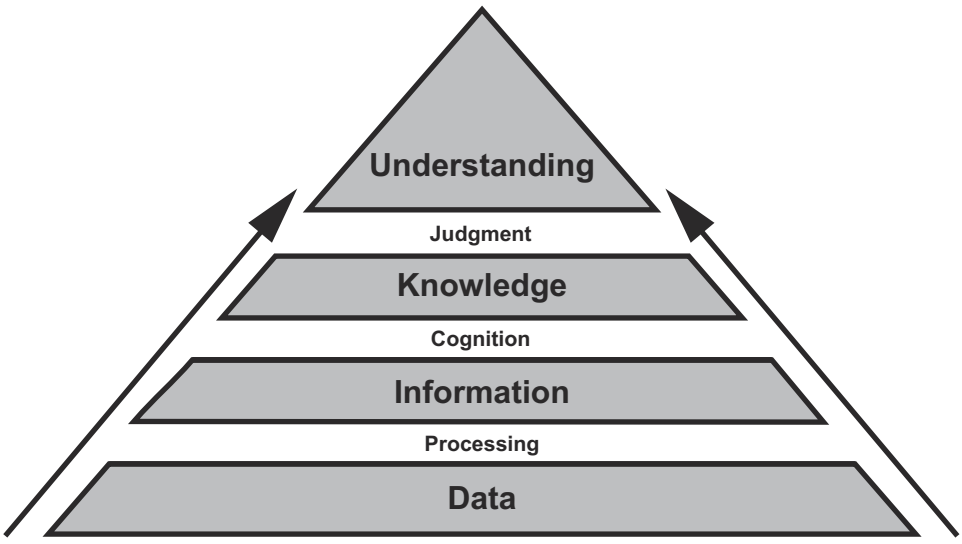


Figure 9-1. Information Hierarchy.

The Intelligence Cycle

Intelligence is the output of a process that converts data and information into knowledge that applies to a specific military decision. The process used to develop intelligence is called the intelligence cycle. This cycle is the process by which information is planned for, obtained, assembled, converted through analysis into intelligence, provided to decisionmakers, and ultimately used to make decisions. (Refer to table 9-1.)

Table 9-1. The Intelligence Cycle.

Intelligence Cycle	Key Considerations
Planning and Direction	Identify intelligence requirements. Plan intelligence operations and activities. Support the formulation of the commander's estimate of the situation.
Collection	Develop the required intelligence structure. Use organic, attached, and supporting intelligence sources to collect intelligence.
Processing, Exploitation, and Production of Intelligence	Conversion of raw data and information into a suitable form of intelligence.
Dissemination	Timely provision of intelligence, in appropriate form, to those who need it.
Utilization	Use of intelligence.

The intelligence cycle consists of a series of related activities that translate the need for intelligence about a particular aspect of the battlespace or threat, into a knowledge-based product that is provided to the commander for use in the decisionmaking process.

Intelligence requirements are identified and a plan is developed for satisfying those requirements. Data points are collected, processed into information, and converted into intelligence through analysis and synthesis and the application of experience and judgment. Processing, analysis, and synthesis of data and information into intelligence can be accomplished rapidly at all levels.

Information is analyzed to determine its significance and is synthesized with other relevant information to build a coherent picture of existing conditions and capabilities. This picture is then used to predict possible outcomes of environmental conditions and enemy actions. Since humans understand situations best as images, intelligence is produced and disseminated in graphic form whenever possible. The resulting knowledge is then conveyed to the commander as an intelligence product that is applied to influence decisionmaking.

PRINCIPLES OF INTELLIGENCE OPERATIONS

The focus of Marine Corps intelligence operations is on the generation of tactical intelligence. However, there are no sharp boundaries between levels of intelligence; they merge and form a continuum. In some instances, Marine Corps tactical intelligence operations will support operational and strategic IRs.

Intelligence is Focused Downward

Intelligence must be available to commanders at all levels. Although the management of intelligence collection and production is centralized in the MAGTF command element, the focus is providing the intelligence needed to plan and execute the mission to every unit involved in the operation. Requirements of the entire force will be considered in directing the intelligence effort.

Intelligence Drives Operations

Intelligence drives operations and remains responsive to mission requirements through close and direct contact with the commander. The Marine Corps warfighting philosophy depends on timely, accurate intelligence for success. Intelligence is a critical component of successful military actions.

Intelligence Activities Require Centralized Management

Good intelligence is the result of the integration of many separate and specialized collection, processing, and analytical resources. The scarcity of these assets, coupled with the requirement to focus on the commander's PIRs, creates the need for centralized coordination and management. This centralization will be done in the SARCC, under the direction of intelligence officers who are trained and experienced in the management of multidiscipline, all-source intelligence operations. All-source intelligence is intelligence that incorporates all available sources of information in the development of the finished intelligence product.

G-2/S-2 Facilitates Use of Intelligence

The intelligence officer enables effective use of intelligence throughout the command. As the principal disseminator of intelligence, the intelligence officer ensures that the full implications of the intelligence picture are understood.

Intelligence Must be Tailored and Timely

Intelligence must be tailored to the requirements of the user, provided in a useful format, and received in time to affect the decisionmaking process. Delivery of the right intelligence, not simply data or information, to the right place at the right time must be the guiding principle of all dissemination efforts.

Utilization is the Final Step of the Intelligence Cycle

Intelligence has no inherent value; its value is derived from its support of decisionmaking. The intelligence cycle is not complete until the intelligence that has been developed is used to plan and/or execute operations. Supported commanders should make every effort to provide feedback on the usefulness of intelligence provided to them by their collectors. This will make the collectors more effective during follow-on collection activities.

INTELLIGENCE FUNCTIONS

There are six intelligence functions that are carried out during the planning, decision, execution, and assessment (PDE&A) cycle at all levels throughout the force. However, particular functions may be stressed more during one phase of the PDE&A cycle. (Refer to table 9-2 on page 9-5.)

Table 9-2. Relationship Between Intelligence Functions and Operations.

Intelligence Functions	Decisionmaking	Operational Activities
Support to commander's estimate	Plan a mission	Develop and analyze COAs
Situation development	Execute the mission	Monitor execution Modify plan as necessary
Indications and warning	Orient on contingencies	Increase readiness Develop contingency plans
Support to force protection	Force protection	Support OPSEC Chemical, biological, radiological, and nuclear defense Support deception plan
Support to targeting	Plan fire support	Attack targets
Support to combat assessment	Reorient forces Plan future operations	Consolidate, pursue, exploit Re-attack targets

Support the Commander's Estimate

Intelligence supports the formulation and subsequent modification of the commander's estimate of the situation by providing an image of the battlespace and threat that is as accurate as possible. Intelligence supports initial planning and decisionmaking. One of the principal tools used in this function is IPB that helps to provide an appreciation for the characteristics of the AO and the enemy's capabilities, weaknesses, and COAs. This knowledge affords the commander an understanding of the battlespace and the opportunity to exploit enemy critical vulnerabilities.

Develop the Situation

Situation development provides continuing knowledge of unfolding events to help update the estimate of the situation. It is a process that assesses the current situation and confirms or denies the adoption of specific COAs by the enemy. It helps refine the commander's understanding of the battlespace and reduces uncertainty and risk. Situation development occurs during execution and provides the basis for adapting plans or exploiting opportunities.

Provide Indications and Warning

Indications and warning serve a protective purpose, providing early warning of potential hostile action. They help prevent surprise and reduce risk from enemy actions that run counter to planning assumptions.

Support Force Protection

Force protection is the set of comprehensive security measures, collection activities, and operations that are undertaken to guard the force against the effects of enemy action. Support to force protection requires detailed and accurate assessments of threat force capabilities and intentions, facilitating efforts to deny the enemy the opportunity to take offensive action against our forces.

Support Targeting

Intelligence supports targeting by identifying target systems, critical nodes, and high-value and high-payoff targets. The intelligence required to most effectively engage these targets is provided as well.

Support Combat Assessment

Combat assessment is the process used to determine the overall effectiveness of military operations and identify requirements for future actions. Intelligence supports the entire combat assessment process and is directly responsible for BDA, which is one of the principal components of combat assessment. The BDA is the timely and accurate estimate of the damage resulting from the application of military force. Included in the BDA estimates are the physical and functional damage to a particular target and the capability of the entire target system to continue its operations.

COMMANDER'S ROLE IN THE INTELLIGENCE PROCESS

Intelligence is an inherent and essential responsibility of command. Commanders must come to think of command and intelligence as inseparable, just as they commonly think of command and operations as inseparable. Commanders must be personally involved in the conduct of intelligence activities, and provide guidance, supervision, judgment, and authority to ensure a timely and useful product.

Focus the Intelligence Effort

The commander must provide the guidance and direction necessary for the effective conduct of intelligence activities. The intelligence effort must be focused on clearly articulated priorities that drive the concept of intelligence support and the collection, production, and dissemination efforts. The commander provides this focus through articulating the commander's intent, planning guidance, and the command's PIRs.

Participate in the Intelligence Process

Although the intelligence officer manages the intelligence effort for the commander, the commander is responsible for the results. Effective participation requires an understanding of the practical capabilities and limitations of intelligence personnel, equipment, procedures, and products. Additionally, the commander must understand the capabilities and limitations of intelligence collectors, their TTP, and their organic equipment.

Use Intelligence in Decisionmaking

Intelligence exists for the primary purpose of aiding the commander's decisionmaking process. Although the intelligence officer facilitates the use of intelligence throughout the command by providing timely dissemination of the intelligence product and ensuring that the meaning of the intelligence is understood, the commander makes the judgment of its operational impact.

Support the Intelligence Effort

Intelligence is a team effort. Good intelligence is the result of integrating many separate and specialized collection, processing, and analytical resources. Intelligence operations by organic assets normally cannot succeed without support from throughout the command. Ground reconnaissance patrols must be inserted and supported, sensors implanted, and communications assets provided for dissemination. Timely and effective intelligence dissemination requires dedicating significant C2 assets. The commander must ensure that all members of the unit understand the importance placed on intelligence and the requirement to support the intelligence effort.

Evaluate the Results of Intelligence Activities

The commander must provide feedback to the intelligence support system. Feedback should identify where the intelligence provided met expectations and where and how it fell short. Key areas to evaluate include product content, presentation, timeliness, and overall usefulness. Meaningful evaluation of the intelligence effort provides the basis for its continual improvement.

DEVELOPING INTELLIGENCE

Intelligence requirements fall into two categories: intelligence and priority intelligence. An understanding of the process used to develop intelligence is critical to the execution of successful intelligence operations. All personnel involved in the development and use of intelligence must be aware of their role in the process. They must understand the relationship between steps in the process to ensure that intelligence focuses on the mission and facilitates rapid decisionmaking in the execution of successful combat operations. (Refer to fig. 9-2 on page 9-8.) For more information, refer to MCWP 2-1.

Intelligence Requirements

An IR is a requirement for intelligence to fill a gap in the commander's knowledge and understanding of the battlespace or enemy forces—IRs drive the intelligence cycle. An IR is a missing piece of information about the enemy or environment that a commander needs to know to make a sound decision. In its simplest form, an IR is a question about the threat or the battlespace, the answer to which is required for the planning and execution of an operation. Properly articulated and mission-oriented requirements focus the intelligence effort and provide the foundation for successful intelligence operations.

Priority Intelligence Requirement

A PIR is an intelligence requirement associated with a decision that will critically affect the overall success of the command's mission. Intelligence requirements cover the entire spectrum of information that is needed concerning the battlespace and the threat. The scarce intelligence assets and limited time available will rarely permit the satisfaction of all of a command's IRs. Thus, it is important to focus the intelligence effort on those requirements that are critical to mission success; these critical IRs are designated as PIRs.

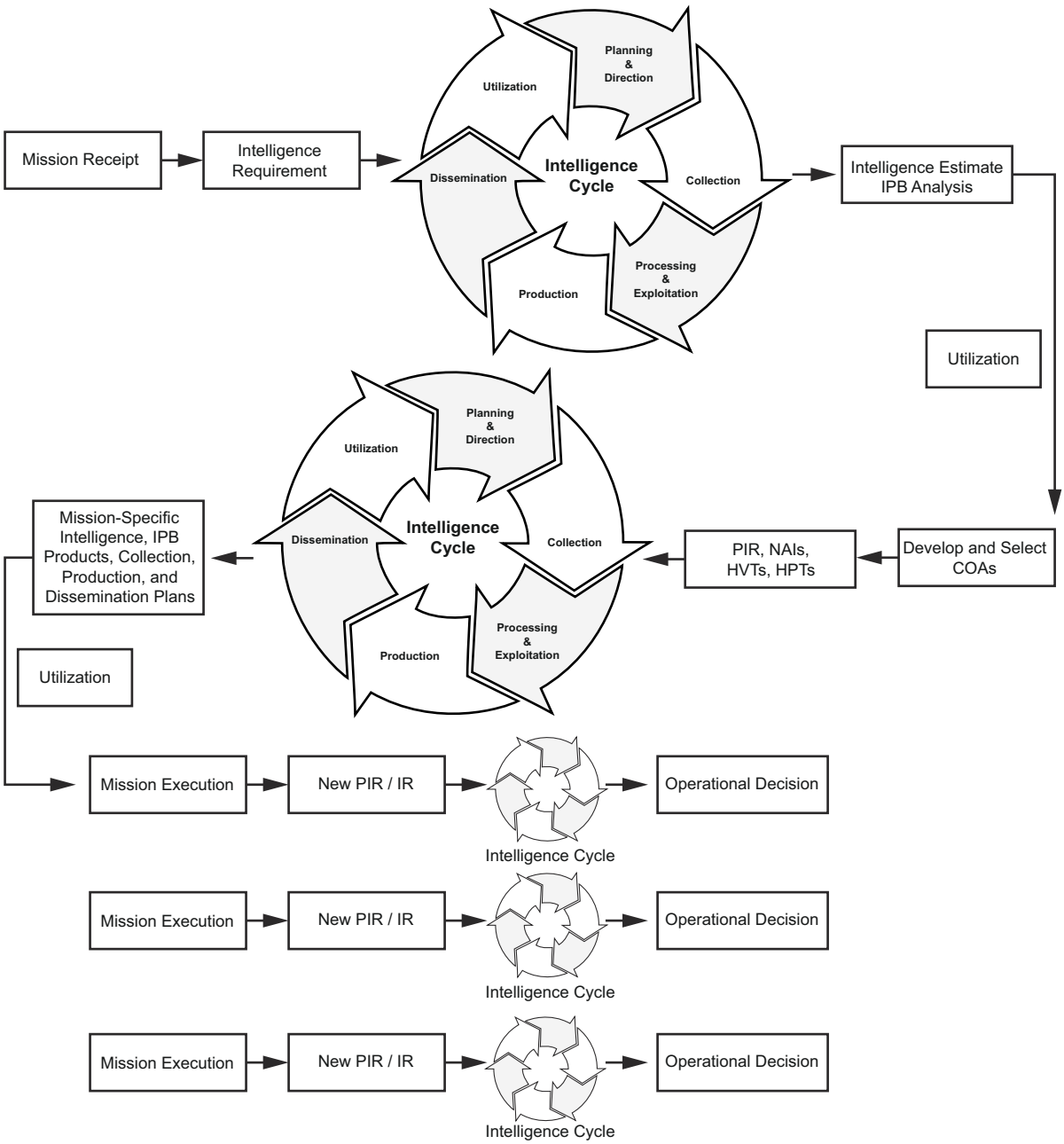


Figure 9-2. Application of the Intelligence Cycle.

A subset of the CCIRs, PIRs focus on the threat and the environment. The CCIRs are intelligence and information requirements, the satisfaction of which, the commander deems critical to decisionmaking and mission success. The PIRs are linked to specific decisions and, in effect, constitute the commander's guidance for intelligence. The commander will often have PIRs that concern the most likely enemy COA, the most dangerous enemy COA, and critical enemy vulnerabilities that can be exploited.

PIR and IR Characteristics

Characteristics of PIRs and IRs include the following:

- Ask only one question.
- Focus on specific facts, events, or activities concerning the enemy or the battlespace.
- Are tied to mission planning, decisionmaking, and execution.
- Provide a clear, concise statement of what intelligence is required.
- Contain geographic and time elements to limit the scope of the requirement.

Requirements may be simple or complex. It is important to understand that the nature and scope of PIRs and IRs will vary with the mission, the level of command, and on the particular phase in the PDE&A cycle. Requirements will generally become more focused as the intelligence cycle is executed. During execution, the intelligence effort should be directed against a small number of PIRs that are closely linked to the concept of operations.

INTELLIGENCE COLLECTIONS

The value of a collection source is not necessarily related to the sophistication or cost of that source, but rather to its ability to gather pertinent data from the collection target (the enemy or environmental consideration that is the subject of the particular intelligence collection requirement).

Geospatial Intelligence

Geospatial intelligence (commonly referred to as GEOINT) provides the geographical context to precisely locate, analyze, and monitor activities and provide the basis for developing shared awareness of the operational environment. All functions within a MAGTF headquarters use geospatially referenced information to fuse, visualize, analyze, and share information for operational awareness and decisionmaking. Persistent ISR enabled geospatial intelligence provides timely, relevant, and accurate geospatial intelligence—imagery, data, and information—for planning, decisionmaking, and action in support of every level of the MAGTF across the range of military operations. Although geospatial intelligence is comprised of IMINT, meteorlogicial and oceanographic (referred to as METOC) information, and GI&S, reconnaissance Marines are primarily focused on IMINT.

Imagery intelligence is intelligence derived from the exploitation of collection by visual photography, infrared sensors, lasers, electro-optics, and radar sensors. Principal sources of imagery are national overhead reconnaissance systems, manned platforms/systems, UASs, and ground perspective imagery (e.g., MSIDS). Imagery intelligence provides concrete, detailed, and precise information on the location and physical characteristics of the environment and the threat. It is the primary source of information concerning key terrain features, installations, and infrastructure used to build detailed intelligence studies and target materials.

The main limitation of aerial IMINT is the time required to task, collect, process, and analyze the imagery. Detailed planning and coordination is required to ensure that the results of imagery collection missions are received in time to affect the decisionmaking process. Imagery operations can be hampered by weather, the enemy's air defense capability, and the enemy's camouflage, cover, and deception activities.

The main advantage of ground perspective imagery is that it can be provided in near-real time eliminating the delay inherent with aerial IMINT collections. Ground reconnaissance Marines providing ground perspective imagery can persist in the environment until inclement weather dissipates and can defeat enemy camouflage, cover, and deception activities using tracking and observation skills.

Human Intelligence

Human intelligence is "a category of intelligence derived from information collected and provided by human sources." (JP 1-02)

Human intelligence operations cover a wide range of activities, including ground reconnaissance patrols, aircrew reports and debriefs, debriefing of refugees, and interrogations of EPWs by appropriately trained personnel. Repeated contacts for the purpose of gathering information requires individuals with appropriate training and credentials. Principal dedicated HUMINT resources are ground reconnaissance units; the CI/HUMINT specialists of the MEF CI/HUMINT Company; and national, theater, and other Service HUMINT elements.

Human intelligence can provide insight into intangible factors such as tactics, training, morale, and combat effectiveness that cannot be collected by technical means and offers the best potential source to discern future plans and intentions. This type of intelligence gathering is particularly important in stability operations, in which the nature of the mission and of the threat generally provides a lucrative environment for HUMINT operations.

Signals Intelligence

Signals intelligence is intelligence information derived from the interception, processing, and analysis of foreign communications, non-communications electronic emissions, and instrumentation signals.

One of the primary means for providing I&W of enemy actions, SIGINT is provided by the radio battalion, the Marine tactical electronic warfare squadron, and an integrated network of national, theater, and joint force SIGINT support agencies. Signals intelligence may provide insight into the enemy's current status and activities and future intentions by providing timely and accurate data on enemy forces that may include details on enemy composition, identification, and location. Principal limitations of SIGINT are that the enemy must transmit signals that can be exploited and that collection assets must be capable of intercepting and positioned to intercept those signals.

Measurement and Signature Intelligence

Measurement and signature intelligence is intelligence information gathered by technical instruments such as radars, passive electro-optical sensors, radiation detectors, and remote ground sensors. The primary tactical application of these devices is to collect sensor data, which is generally

provided directly to operations centers for immediate decisionmaking. The data collected can also provide significant intelligence information on enemy movements and activities.

Key MAGTF MASINT capabilities are remote ground sensors, weapons locating radars, and air surveillance radars. These sensors provide an efficient means to maintain surveillance over large portions of the battlespace. The GSPs provide the logistic support, maintenance, training, and monitoring of the equipment. Ground reconnaissance units can emplace the sensors in proximity to the surveillance area, when required.

PROCESSING AND PRODUCING INTELLIGENCE

Processing and exploitation involves the conversion of collected data into information that is suitable for the production of intelligence. Processing is largely a technical function that does not add meaning to the data but is necessary to convert data into a form that people can understand. The ROC is responsible for processing reports received from ground reconnaissance patrols prior to those reports being sent to the SARCC or to the supported unit's G-2/S-2 and G-3/S-3.

Production

Production is the activity that converts information into intelligence. It involves the evaluation, interpretation, integration, analysis, and synthesis of all information that is relevant to a particular IR to answer the question that has been asked.

Production fuses new information and existing intelligence from all sources to provide meaningful knowledge that can be applied to the decisionmaking process. During the production phase, information is—

- Evaluated to determine pertinence, reliability, and accuracy.
- Analyzed to isolate significant elements.
- Integrated with other relevant information and previously developed intelligence.
- Interpreted to form logical conclusions that bear on the situation and support the commander's decisionmaking process.
- Applied to estimate possible outcomes.
- Placed into the product format that will be most useful to its eventual user.

Intelligence Preparation of the Battlespace

Intelligence preparation of the battlespace is the primary analytical methodology used to produce intelligence in support of the decisionmaking process. It furnishes a framework for integrating intelligence and operations throughout the PDE&A cycle.

Intelligence preparation of the battlespace is a systematic, continuous, mission-focused process of analyzing the environment and the threat in a specific geographic area. Consisting of four steps, IPB—

- Defines the battlespace environment.
- Describes the battlespace effects.
- Evaluates the adversary.
- Determines adversary COAs.

The IPB process provides a means to interpret information and understand the battlespace that can be applied in any operational situation. Through the IPB process, the information that has been collected and processed is analyzed, combined, and used to estimate possible outcomes that can affect mission accomplishment. Intelligence preparation of the battlespace emphasizes providing intelligence in the form of graphics and images; formats that help the commander to rapidly visualize, assimilate, and apply the intelligence in the decisionmaking process. The result is knowledge-based intelligence.

Although IPB is fundamentally an intelligence process, successful application of the process to support planning and execution depends on the participation of the commander and the entire staff. The commander focuses the IPB effort by defining the area and key factors to be studied. The commander's guidance and the complete involvement of the staff are necessary to ensure that the IPB effort encompasses aspects of concern for all warfighting functions and provides detailed and accurate intelligence for COA development and detailed planning. Intelligence preparation of the battlespace is an effective tool only when the results are used to develop plans and support decisionmaking during execution.

EVALUATING INTELLIGENCE

During evaluation, the intelligence section determines the relevance, the source reliability, and the accuracy of recorded information. Evaluating information in this manner also determines whether immediate or deliberate production and dissemination should be performed.

Intelligence collectors must be objective and unbiased to avoid any tendency toward preconceived ideas. When conflicting information exists, efforts should be made to resolve the difference. If time and resources are inadequate to provide explicit intelligence, the commander must be made aware of the uncertainty. Commanders need pertinent intelligence, including conflicting or contradictory information and opinions.

Intelligence analysts integrate and tailor information from multiple sources to provide a clear picture of the battlespace to decisionmakers. Evaluation of this multi-source information consists of relevance, reliability, and accuracy. (For more information on intelligence evaluation, refer to MCWP 2-3.)

Relevance

Upon receipt, each item of information is examined for its relevance by area, time, and content. Information relevant to the AO or AOI is processed further. Urgent information is rapidly evaluated and disseminated to those who need it. Information that is not of an urgent nature is usually fully evaluated, interpreted, and disseminated later.

Reliability

The information source and the information collection agency are always evaluated for reliability. Analysts expect a highly reliable source to provide accurate information. However, analysts must consider that even highly reliable human sources have limitations. Information reported from reliable sources should be compared with other facts before being classified as a fact.

The headquarters closest to the collection source or agency is ordinarily the best judge of its reliability. Normally, a HHQ accepts the reliability evaluation of the reporting headquarters. Criteria for evaluating unit reliability include knowledge of the unit's training, experience, and past performance.

Accuracy

Accuracy involves the probable truth of the information. The most reliable method of judging accuracy is comparison with other information obtained through other collection sources and agencies. Higher echelons have access to more sources of information and intelligence than lower echelons, thus they provide more opportunity to confirm, corroborate, or refute the accuracy of reported data. Regardless of the source, the accuracy of each report or piece of information is reevaluated at each echelon. Processed, evaluated, and interpreted information received from HHQ may be old, or new information that was not available at the time of the HHQ assessment may alter the information's accuracy.

INTELLIGENCE REPORTING

There are four levels of intelligence reporting used to facilitate the SARCC's and supported unit's recording of the subtle and important details of the activities from all-source collections for further analysis, future planning, and dissemination to lower echelons and HHQ.

Reporting this information to HHQ allows them to analyze a broad range of information and intelligence and to disseminate intelligence back to the SARCC, supported units, and higher echelons. Therefore, the SARCC and supported unit's G-2/S-2 must meticulously and proactively lead a unit-debriefing program. Information reported through a debriefing must be disseminated. (Refer to table 9-3 on page 9-14.)

Reporting and Debriefing

Intelligence report formats require brief entries that subsequently require the collector to break information into basic elements: who, what, where, when, why, and how. This allows for efficient reporting via electronic or hardcopy medium. Report formats allow analysts to quickly scan

multiple reports to find specific information. Reporting formats need to be consistent from lower to higher echelon units to facilitate information flow.

Without clear reporting or deliberate debriefing, observed information is not effectively collected and stored. This information must be conveyed in a manner that meets the needs of a leader's tactical information requirements as well as facilitates intelligence production to answer the CCIRs.

Intelligence Reporting Levels

There are four levels of intelligence reporting that ensure information collected through the observations of individual ground reconnaissance Marines and patrols are prioritized and entered into the intelligence system:

- Level I: reconnaissance reports.
- Level II: ground reconnaissance patrol reports.
- Level III: intelligence debriefs.
- Level IV: mission reports.

Observed information that is reported accurately, in a timely manner, in the proper format, and to the correct recipients, becomes part of the all-source intelligence product in time to affect operational decisions. (Refer to table 9-3.)

Table 9-3. Intelligence Reporting Levels.

Reporting Level	Responsible Unit	Generated Report
Level I Reconnaissance reports	Ground reconnaissance patrol	Tactical information using the MCRP 2-25A, Reconnaissance Reports Guide
Level II Ground reconnaissance patrol reports After action reports	Ground reconnaissance platoon ROC	RAIDERREP
Level III Intelligence debriefs	Supported unit G-2/S-2 SARCC	Intelligence debrief
Level IV Mission reports	ROC Mission commander	Mission report: consisting of the RAIDERREP, intelligence debrief, and mission planning folder

Level I Intelligence Reports. Level I intelligence reports consist of information of critical tactical value and is reported in near-real time to the ROC from deployed ground reconnaissance patrols. Information of immediate interest to the commander should be transmitted to the ROC as soon as the tactical situation allows. Refer to MCRP 2-25A for tactical reporting formats.

Level II Intelligence Reports. Level II intelligence reports consist of other information of tactical, operational, or strategic value that was collected during the ground reconnaissance patrol.

Immediately upon return from patrol, ground reconnaissance Marines will conduct an after action review and report. The after action reports, the Level I intelligence reporting, and the ROC's debriefing from all employed ground reconnaissance patrols will be fused to generate the RAIDERREP.

The RAIDERREP captures the AO and mission-specific information. This report is passed to the supported unit's G-2/S-2 and the SARCC prior to the formal intelligence debriefing. Patrols must report as completely and accurately as possible since this report will form the basis of the intelligence section's debriefing. (Refer to app. J.) The RAIDERREP is included in the mission report generated by the mission commander/IOC and is stored in an intelligence repository, such as Intel Link, for future reference. The RAIDERREP focuses on information that will be valuable for follow-on forces and includes imagery for reference.

The RAIDERREP consists of the following:

- Mission statement.
- Patrol narrative by phase (i.e., insertion, infiltration, actions on the objective, exfiltration, and extraction).
- Considerations of KOCOA and the effects on friendly and enemy forces.
- Observed enemy tactics.
- Map errors or modifications.
- Communications.
- Consumption rates (e.g., batteries, food and water, fuel, ammunition).

Level III Intelligence Reports. Level III intelligence reports consist of other information of tactical, operational, or strategic value that was collected during the G-2/S-2 and/or SARCC debriefing. This information is then fused with reporting from other collectors across the MCISR-E. The consolidated and combined reporting from units such as ground reconnaissance units, radio battalion elements, and CI/HUMINT elements is used to generate Level III intelligence reporting. Follow-up reports may be submitted after the G-2/S-2 and/or SARCC perform their debriefing. (Refer to app. J.)

After receiving the RAIDERREP, the G-2/S-2 and/or SARCC will debrief the patrol for further details and address PIRs and IRs not already covered in the RAIDERREP. The intelligence section's debriefing will concentrate on filling in the gaps and following up on information reported in the RAIDERREP. Generic topics for intelligence debriefings include military activities, order of battle information, civilian activities (indigenous personnel and institutions), and infrastructure.

When ground reconnaissance battalions, companies, platoons, or smaller elements deploy to remote locations, debriefings by the G-2/S-2 and SARCC may not be possible. Ground reconnaissance unit leaders conduct debriefings to ensure reports are available to the intelligence section and staff. Reporting by the most expeditious means possible ensures that Level II and Level III intelligence reports are available for timely intelligence analysis.

Level IV Intelligence Reports. Level IV intelligence reports are generated at the end of an operation and include intelligence reports and debriefs from all collectors across the MCISR-E consolidated into one package, endorsed by the mission commander and/or ISC. Level IV intelligence reports, known as mission reports, are then routed to HHQ and placed in an intelligence database for future reference.

Mission reports consist of the intelligence reports and debriefs from the all-source collections of ground reconnaissance missions in support of a particular operation. The mission reports are composed of the following:

- Ground reconnaissance mission planning folder.
- Level I intelligence reports and imagery, as needed.
- Level II intelligence reports such as the RAIDERREP.
- Level III intelligence reports, the G-2/S-2 and SARCC fusion of all-source intelligence reporting and debriefing.
- Additional intelligence products as required by the mission commander.

DISSEMINATION

Dissemination is the timely conveyance of intelligence to users in an appropriate form. Many times, intelligence operations focus almost exclusively on the collection and production phases, with the intelligence cycle often breaking down because insufficient attention is given to the dissemination phase. Dissemination must be planned and supervised to the same degree as collection and production or we risk the failure of the intelligence support function.

Form

There are several factors that must be considered when determining the form to be used in disseminating the intelligence product. These factors include—

- Purpose of the intelligence product.
- Urgency and relevance of the intelligence to ongoing operations.
- Type and volume of the intelligence.
- User's capability to receive intelligence products.
- Dissemination means available.

Decisionmaking is a mental process and human beings think and understand primarily in the form of images. The goal of intelligence dissemination is to convey to the decisionmaker an accurate image of the battlespace or threat in a form that facilitates rapid understanding of that image. For this reason, graphics are the preferred dissemination form.

Imagery, overlays, diagrams, and schematics enhanced with appropriate textual data and annotations will be used as the baseline dissemination format whenever possible. However, in

time-sensitive situations, the verbal report or short text message may be the most expeditious dissemination form. Whether oral, text, or graphic, intelligence products should use standard formats whenever possible. Standard formats facilitate ease of preparation and dissemination, as well as usability of the intelligence product.

Delivery

Delivery of the intelligence product to the right person in a timely manner is directly related to the means selected to disseminate that product. Dissemination is managed by using a combination of methods, channels, and modes to convey the product to the user.

Methods. There are two basic methods used to disseminate intelligence: supply-push and demand-pull.

Supply-Push Method. The collectors/producers "push" intelligence to the users as it becomes available. The main advantage to this method is that users do not have to initiate requests to receive products. However, there is the potential for information overload. To prevent information overload, the dissemination node should tailor what it is passing through the system, not simply "dump" everything that it has received or developed.

Demand-Pull Method. This method provides access to intelligence on an as-needed basis. The user draws the required intelligence from the intelligence support system through a series of searches or inquiries. The use of demand-pull decreases the volume of intelligence being transmitted and diminishes the possibility of overwhelming units with superfluous products. However, demand-pull can also reduce the timeliness of dissemination by developing and providing intelligence only after a request has been received.

The dissemination system must provide the flexibility to use either method, "pushing" important or time-sensitive intelligence directly to users, while at the same time permitting them to "pull" other relevant intelligence as needed from readily accessible sources, such as a database (Intel Link) or a watch section at an ROC or SARCC.

Channel. Intelligence is disseminated using two types of channels: standard and alarm.

Standard. Standard dissemination is used for routine intelligence and is transmitted according to a set order and format, usually along established command or staff channels. Examples include the formal staff briefing and standardized reports.

Alarm. The alarm channel is used to disseminate critical, time-sensitive intelligence that can have an immediate effect on the conduct of the operation. Examples include I&W of immediate hostile activity.

Although the standard channel is used to satisfy the majority of dissemination requirements, care must be taken to monitor the flow of what is passing through the pipeline to ensure that the intelligence provided is timely and pertinent to the units receiving it.

A particularly important connection that is often neglected in standard dissemination is lateral dissemination; intelligence must flow laterally between units as well as up and down the chain of

command. Lateral dissemination ensures that all commanders and leaders have a shared picture of the battlespace.

Modes. Intelligence is disseminated in one of two modes: broadcast or point-to-point.

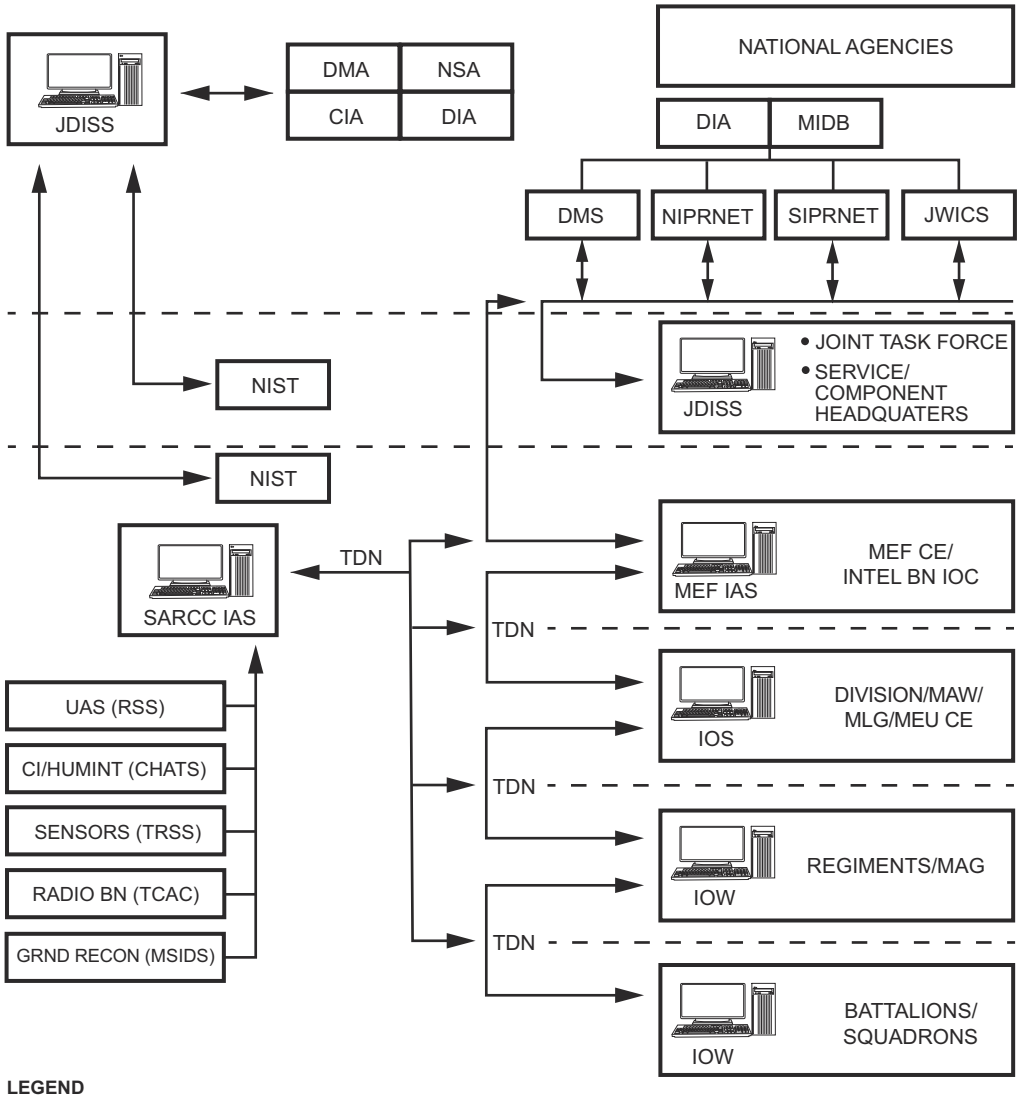
Broadcast Mode. In broadcast mode, intelligence that affects the majority of units is sent simultaneously to a broad audience and may be Web-based. Examples include: I&W alarms, intelligence products developed by the MAGTF G-2, or reporting from organic collection assets. Successful use of the broadcast mode depends on several factors: judicious selection of what intelligence is broadcasted, the ability of the appropriate users to monitor the broadcast, and employment of a processing methodology or system to filter and select for detailed examination only those broadcast items that are pertinent to the user's requirements.

Point-to-Point Mode. In the point-to-point mode, intelligence is sent to a specific user or users, normally in response to a specific request or requirement, and is passed along sequentially as appropriate. Dissemination across the system is slower, but is more focused and can provide intelligence that is tailored to the needs of each individual unit. Point-to-point dissemination may be enhanced through the use of classified e-mail systems.

Architectures

Intelligence architectures provide the means to disseminate intelligence. (Refer to fig. 9-3 on page 9-19.) Dissemination planning analyzes and anticipates the dissemination requirements and designs the appropriate architecture to meet those requirements. The objective is to provide the right intelligence to the appropriate user in a timely manner, while at the same time not overwhelming them with a massive amount of unfocused data.

Architectures will be developed with the objective of facilitating the exchange of graphic intelligence throughout the force, down to the lowest tactical echelon. The means will consist of a combination of procedures, CIS, and communications networks, effectively supervised to ensure that the dissemination requirements are being satisfied.



LEGEND

CE	command element
CHATS	CI/HUMINT automated tool set
CIA	Central Intelligence Agency
DIA	Defense Intelligence Agency
DMA	Defense Mapping Agency
DMS	defense message system
GRND RECON	ground reconnaissance
IAS	intelligence analysis system
Intel Bn	Intelligence Battalion
IOS	intelligence operations server
IOW	intelligence operations workstation
JDISS	joint deployable intelligence support system
JWICS	Joint Worldwide Intelligence Communications System
MAG	Marine aircraft group
MAW	Marine aircraft wing
MEF	Marine expeditionary force
MEF	Marine expeditionary force
MEU	Marine expeditionary unit
MIDB	modernized integrated database
MLG	Marine logistics group
NIPRNET	Nonsecure Internet Protocol Router Network
NIST	National Intelligence Support Team
NSA	National Security Agency
RSS	remote receiver station
SIPRNET	Secured Internet Protocol Router Network
TCAC	technical control and analysis center
TDN	tactical data network
TRSS	Tactical Remote Sensor Systems

Figure 9-3. Marine Expeditionary Force Intelligence Architecture.

APPENDIX A
RECRUITMENT, ASSESSMENT, AND SELECTION PROGRAM

RECON CREED

Realizing it is my choice and my choice alone
to be a Reconnaissance Marine,
I accept all challenges involved with this profession.
Forever shall I strive to maintain the tremendous reputation
of those who went before me.

Exceeding beyond the limitations
set down by others shall be my goal.
Sacrificing personal comforts and dedicating myself
to the completion of the reconnaissance mission shall be my life.
Physical fitness, mental attitude, and high ethics—
The title of Recon Marine is my honor.

Conquering all obstacles, both large and small,
I shall never quit.
To quit, to surrender, to give up is to fail.
To be a Recon Marine is to surpass failure;
To overcome, to adapt and to do whatever it takes
to complete the mission.

On the battlefield, as in all areas of life,
I shall stand tall above the competition.
Through professional pride, integrity, and teamwork,
I shall be the example
for all Marines to emulate.

Never shall I forget the principles
I accepted to become a Recon Marine.
Honor, Perseverance, Spirit and Heart.
A Recon Marine can speak without saying a word
and achieve what others can only imagine.

OVERVIEW OF A RECONNAISSANCE MARINE

Realizing it is my choice and my choice alone
to be a Reconnaissance Marine,
I accept all challenges involved with this profession.
Forever shall I strive to maintain the tremendous reputation
of those who went before me.

The physical and psychological demands on a ground reconnaissance Marine generally exceed those placed on conventional infantrymen. Instead of operating near friendly supporting units, ground reconnaissance patrols operate far from friendly-controlled areas or deep in the enemy's rear areas, typically, surrounded by hostile forces. Ground reconnaissance patrols operate independently for long periods of time without support. These Marines must rely only on each other and on what they can carry.

Ground reconnaissance Marines are responsible for conducting AFO, pre-assault, and post-assault reconnaissance in support of the MAGTF commander. In addition to basic infantry skills, they are responsible for maintaining highly-refined scouting and patrolling skills.

Ground reconnaissance Marines possess advanced proficiency in combat swimming; small boat operations; close combat skills; helicopter insertion/extraction techniques; assault climbing; demolitions; forward observer procedures for supporting arms; ITG operations for heliborne, airborne, and waterborne forces; long-range communications; imagery collections; threat weapons and equipment identification; and ground reconnaissance, underwater reconnaissance, amphibious reconnaissance, and surveillance operations. Ground reconnaissance men are further trained as parachutists, combatant divers, jump masters, dive supervisors, HRST masters, and snipers.

The pressure of having to perform under such extreme circumstances requires more than extraordinary physical capabilities—it also requires specific character traits.

Ideally, ground reconnaissance Marines are selected in three stages: recruitment, assessment, and selection.

RECONNAISSANCE TRAINING COMPANY

Exceeding beyond the limitations
set down by others shall be my goal.
Sacrificing personal comforts and dedicating myself
to the completion of the reconnaissance mission shall be my life.
Physical fitness, mental attitude, and high ethics—
The title of Recon Marine is my honor.

The purpose of the RTC is to train ground reconnaissance Marines in entry level and advanced reconnaissance skills. The RTC is responsible for instructing Marines Awaiting Reconnaissance Training (MART), Basic Reconnaissance Course, Reconnaissance Team Leaders Course, and Reconnaissance Unit Leaders Course.

Marines Awaiting Reconnaissance Training

The purpose of MART is to identify and gauge the potential of individual Marines to meet the physical and mental demands imposed on ground reconnaissance Marines during training and combat operations. Graduates are qualified to attend the Basic Reconnaissance Course.

Basic Reconnaissance Course

The purpose of the BRC is to train Marines, in addition to other Services, in the TTP and individual skills required of the ground reconnaissance man. Graduates are qualified to assume the roles and responsibilities of a ground reconnaissance Marine.

Reconnaissance Team Leaders Course

The purpose of the RTLC is to train and evaluate Marines in the TTPs of ground reconnaissance operations. The RTLC emphasizes critical thought and tactical decisionmaking in order to transition the ground reconnaissance Marine into a reconnaissance leader. Graduates understand tactical-level operations and integration and are qualified to assume the roles and responsibilities of team and platoon-level leadership.

Reconnaissance Unit Leaders Course

The purpose of the RULC is to train and evaluate Marines in the planning, training, execution, and evaluation of ground reconnaissance operations. The RULC emphasizes critical thought and operational-level decisionmaking in order to transition the reconnaissance TL into a reconnaissance unit leader. Graduates understand operational-level planning and maneuver integration. These Marines are qualified to assume the roles and responsibilities of platoon- and company-level leadership.

RECRUITMENT

Conquering all obstacles, both large and small,
I shall never quit.
To quit, to surrender, to give up is to fail.
To be a Recon Marine is to surpass failure;
To overcome, to adapt and to do whatever it takes
to complete the mission.

Enlisted Marines should volunteer or be nominated for ground reconnaissance training based on their proven ability or their potential to perform and thrive under the demanding conditions that

characterize ground reconnaissance operations. Candidates for the primary MOS (PMOS) 0321, Reconnaissance Man, are recruited by two methods:

- Initial accessions into the Marine Corps by the Marine Corps Recruiting Command.
- Lateral move from another PMOS within the Marine Corps.

Ground Reconnaissance Marine Prerequisites

Initial Accession Marines and lateral move Marines volunteering for the PMOS 0321 must meet the following prerequisites to be considered for ground reconnaissance candidacy. For more information refer to MCO 1200.17_, *Military Occupational Specialties Manual (MOS Manual)*.

Expeditionary Ground Reconnaissance Officer Prerequisites

Marine officers desiring to serve in a ground reconnaissance unit and attain the NMOS 0307, Expeditionary Ground Reconnaissance Officer, should volunteer and be nominated for ground reconnaissance training based on their proven ability to perform and thrive under the demanding conditions that characterize ground reconnaissance operations. For more information, refer to MCO 1200.17_.

Character Traits Common to Ground Reconnaissance Marines

The success of the individual ground reconnaissance Marine (MOS 0321/0307) is essential to the success of the overall ground reconnaissance mission. Ground reconnaissance leaders and Marine Corps leadership must understand the psychological characteristics of those individuals most likely to succeed and thrive in the demanding and dangerous environments that typify ground reconnaissance training and operations. See figure A-1 on page A-5.

ASSESSMENT

On the battlefield, as in all areas of life,
I shall stand tall above the competition.
Through professional pride, integrity, and teamwork,
I shall be the example
for all Marines to emulate.

Individual assessment for ground reconnaissance Marines and expeditionary ground reconnaissance officers takes place at the RTC during the MART phase of training. Prior to beginning the MART phase of training, Marines must meet the prerequisites of PMOS 0321 or NMOS 0307 candidacy.

Initial Steps

The first step in the training of a ground reconnaissance Marine is the MART assessment. The assessment process is used to evaluate the potential of ground reconnaissance candidates in their combat swimming skills, physical stamina, and character traits. MART is generally four weeks long and includes classroom instruction, physical training, introduction to critical reconnaissance skills, and assessment and selection.

Desirable Traits	
Effective, functional intelligence:	
Conceptual complexity	
Trainability and situational awareness	
Emotional stability:	
Humor	
Learned optimism	
High stress/mental strain tolerance	
Self-efficacy	
Moral reasoning and integrity	
Humility	
Professional	
Adept at field craftsmanship, able to “make do”:	
Resourceful	
Heart, soul, and spirit of the warrior:	
Physical and mental endurance	
Never quit attitude (tough, demanding, seeks challenges)	
Hard feet, tough back	
Driven to prove self each and every day (strives for excellence, fast paced)	
Does not rest on laurels or past accomplishments	
Realistic, combat mindset	
Team work, self sacrifice	
Lethal	
Undesirable Traits	
Anxiety or mood disorders	Chronic relationship problems
Antisocial personality	Uncooperative family
	Chronic financial problems
Serious phobias	Low trainability
High substance abuse potential	“Rambo” syndrome
Undue sensitivity	Low motivation
Impulsivity	
Disqualifiers	
Chronic disciplinary problems	
Drug use	
Chronic alcohol abuse	
Financial irresponsibility	

Figure A-1. Character Traits for Ground Reconnaissance Marines.

Physical Assessment

During the assessment phase of MART, ground reconnaissance candidates must successfully achieve the standards set forth in the program of instruction to be qualified for entering training at the Basic Reconnaissance Course.

If the candidate fails any portion of the assessment phase, they may be encouraged to remain in the program and continue to prepare themselves for selection. This opportunity will be at the discretion of the RTC instructor staff.

SELECTION

Never shall I forget the principles
I accepted to become a Recon Marine.
Honor, Perseverance, Spirit and Heart.
A Recon Marine can speak without saying a word
and achieve what others can only imagine.

Upon successful completion of the MART assessment phase, the ground reconnaissance candidates commence the MART selection phase. During the selection phase, the candidates' performance during their assessment will be reviewed, they will be interviewed, and it will be verified that they meet all prerequisites for PMOS 0321 or NMOS 0307. If the candidates are selected during this phase of MART, they will begin the Basic Reconnaissance Course.

Interview

The RTC instructor staff interviews all candidates to determine if the candidates possess the desirable character traits of a ground reconnaissance Marine and to identify any undesirable character traits. Enlisted candidates are interviewed by the SNCOs of RTC; officer candidates are interviewed by the company commander and SNCOs of RTC. After the interview process, the candidates may be granted permission to proceed to the BRC and begin their training.

Withdrawal from the Assessment and Selection Process.

Any candidate may voluntarily withdrawal themselves at any time during the assessment and selection process. If a Marine voluntarily leaves the program, they cannot reenter MART for a period of 24 months. The commanding officer of the Reconnaissance Training Company, Advanced Infantry Training Battalion, may reject any candidate he may feel has failed to meet the requirements or standards to be a ground reconnaissance Marine.

REASSIGNMENT

Upon graduation from the Basic Reconnaissance Course, the individual Marine has met all requirements to attain the PMOS 0321or NMOS 0307 and be assigned to a ground reconnaissance unit. Once the Marine meets the criteria for assignment to a ground reconnaissance unit, he must continue to perform his duties adhering to the standards demanded of ground reconnaissance operations.

Should a Marine fail to meet service performance requirements or ground reconnaissance unit standards, the commander will recommend that he be administratively separated from the Marine Corps or be administratively reassigned another PMOS based on the needs of the Service.

General

The procedures and instructions in this section pertain to the administrative separation or administrative reassignment of the PMOS of Marines before completion of their active service.

Administrative Separation

Procedures and instructions for administratively separating Marines from the Marine Corps before the completion of their active service can be found in MCO 1900.16_, *Separation and Retirement Manual (MARCORSEPMAN)*. Reasons for administrative separation include, but are not limited to, unsatisfactory performance, misconduct, and weight control failure.

Administrative Reassignment

Administrative reassignment of a Marine's PMOS is based on the commanding officer's recommendation due to individual performance or personal situations that degrade the ground reconnaissance unit's ability to accomplish its assigned mission of providing advance force, pre-assault, and post-assault reconnaissance in support of the MAGTF commander.

Policy

The Marine Corps substantially invests in training every Marine who enters its ranks. Administrative reassignment of the PMOS before completion of a period of obligated service represents a loss of investment and requires increased accessions.

Conversely, retaining individuals in the ground reconnaissance community who will not or cannot conform to the required standards of performance creates high costs in terms of substandard mission performance, administrative efforts, incentive pay, retention bonuses, and degradation of morale.

Therefore, every reasonable effort must be made to identify, in a timely manner, ground reconnaissance Marines who exhibit likelihood for early administrative separation or administrative reassignment of the PMOS. Early identification of these Marines will—

- Improve those Marines' chances of retention through counseling and retraining.
- Separate promptly those Marines who do not demonstrate potential for further useful service, and recoup (pro rata), as provided by applicable regulations, monies expended for bonuses paid and/or education/training dollars paid to a member in return for enlisting, reenlisting, or extending a service obligation when that service is administratively terminated before successful completion.
- Promptly administratively reassign Marines' to another PMOS where they can provide further useful service, but have not demonstrated the ability or will required to perform ground reconnaissance operations.

The standards and procedures established within this section are intended to achieve consistency of application throughout the ground reconnaissance community based on command responsibility, accountability, and discretion.

Commanders will ensure that Marines who meet the criteria for separation according to MCO 1900.16_ or administrative reassignment of the PMOS are processed promptly.

Counseling

Marine Corps policy is that reasonable efforts at rehabilitation should be made before initiation of PMOS reassignment procedures. In cases involving unsatisfactory performance of duties, PMOS reassignment processing may not be initiated until the Marine is counseled concerning deficiencies, and afforded a reasonable opportunity to overcome those deficiencies as reflected in appropriate counseling and personnel records.

No specific amount of time can be used to define "reasonable opportunity." This must be determined by the commanding officer on a case-by-case basis. The commanding officer/OIC must sign adverse counseling entries. Rehabilitation efforts should be documented in the Marine's training and counseling folder by the commanding officer/OIC and the Marine.

The commanding officer/OIC will provide written notification concerning deficiencies providing specific recommendations for corrective action and indicating any available assistance. The commanding officer/OIC will provide comprehensive explanation of the consequences of failure to successfully take the recommended corrective action. The Marine will be given a reasonable opportunity to undertake the recommended corrective action.

The Marine will acknowledge the counseling by signing the required documentation. The Marine's signature acknowledges that counseling has occurred, not that the Marine concurs with the content of the entry. These entries, once properly made, may not be removed by subsequent leadership based upon the passage of time or subsequent good performance.

The commanding officer must determine, on a case-by-case basis, whether the Marine has effectively overcome the noted deficiencies after the counseling. There are no requirements for subsequent imposition of non-judicial punishment or other administrative or judicial actions as a prerequisite for PMOS reassignment processing. However, there must be some evidence in the administrative PMOS reassignment processing indicating that the Marine has not overcome the noted deficiencies.

A Marine being processed for administrative PMOS reassignment under one of the instances requiring counseling may only be processed if the counseling entry reasonably relates to the specific basis for the ultimate recommendation.

No "statute of limitations" exists for administrative PMOS reassignment. Once a Marine is counseled and given "reasonable opportunity" to correct himself, he can still be reassigned.

A Marine being considered for administrative PMOS reassignment who is eligible for transfer to the FMCR/retired list will, at his request, be allowed to transfer to the FMCR/retired list before initiating administrative PMOS reassignment processing. If the Marine declines to transfer to the FMCR/retired list, the convening authority shall proceed with the administrative PMOS reassignment processing.

Unsatisfactory Performance

A Marine may be administratively reassigned to another PMOS if the Marine is unqualified for further service by reason of unsatisfactory performance. Unsatisfactory performance is characterized by—

- Performance of assigned tasks and duties in a manner that does not contribute to unit readiness and/or mission accomplishment, as documented in the training and counseling folder.
- Failure to meet the performance based criteria as set forth in the NAVMC 3500.55_, *Reconnaissance (Recon) Training and Readiness (T&R) Manual*.
- Failure to meet PMOS 0321, MOS 0323, MOS 0324, or MOS 0326 prerequisites and requirements as established in MCO 1200.17_.
- Failure to maintain required proficiency in grade, as demonstrated by below average proficiency/conduct numerical marks or adverse fitness report markings or comments accumulated in the training and counseling folder.

Initiation of Administrative PMOS Reassignment

When a Marine's performance falls within any of the unsatisfactory performance conditions and all required command attempts at leadership and rehabilitation of the Marine have been unsuccessful, the commanding officer will initiate administrative PMOS reassignment process. At the command level, the process involves identification of a particular case, notification to the Marine, and preparation of a recommendation to the PMOS reassignment authority with evidence supporting the recommendation.

A commanding officer must provide written notice to any Marine being recommended for administrative PMOS reassignment. Commands may develop their own procedures; however, such written notice shall include the following: each of the specific reasons for PMOS reassignment and the circumstances upon which each action is based. Notification letters and command recommendations will be signed personally by the commanding officer. During the commanding officer's official absence, such correspondences will be signed "Acting" by the officer temporarily succeeding to command.

Once the notification requirements have been met, and provided the commanding officer desires to continue the process, the commanding officer must forward the following to the Head, Ground Combat Element Branch; Plans, Policies, and Operations (POG):

- Commanding officer's recommendation for PMOS reassignment, which bears significant weight.
- Copies of the appropriate notifications.
- Necessary supporting documentation:
  - Service Record Book (SRB) Pages 3, 11, 12, 13 (if applicable). The Record of Service is often valuable as supporting documents, but should be submitted only if germane. When administratively more practical, data within the SRB can be incorporated into the commanding officer's recommendation. For example, average duty proficiency and conduct marks may be submitted versus SRB page 23.

- In most cases before initiation of PMOS reassignment processing, Marines have been involved in leading, counseling, and assisting the Marine concerned. Statements from these NCOs, SNCOs, and officers are typically very helpful to the PMOS reassignment authority in deciding a Marine's case.
- Other documentation directly relating to the primary reason for PMOS reassignment must be forwarded as part of any recommendation.

Administrative PMOS Reassignment

Upon receipt of the commanding officer's recommendation for administrative PMOS reassignment, the Head, GCE Branch, PP&O (POG) will make a determination to approve or disapprove the recommendation. All approved packages will be sent to DC, M&RA (MMEA-82) for PMOS reassignment.

Recoupment of Enlistment/Reenlistment Bonuses

Recoupment of unearned portions of enlistment/reenlistment/career status bonuses may be directed when an active duty Marine is administratively reassigned a PMOS for failing to meet MOS obligations.

APPENDIX B
PREPARATION OF THE FORCE

The ground reconnaissance officers are the commanders or assistants to the commander in the reconnaissance battalions and the FORECON companies. As such, they plan, direct, and assist in the deployment and tactical employment of ground reconnaissance units by evaluating intelligence; estimating the operational situation; and formulating, coordinating, and executing appropriate plans for all aspects of the assigned reconnaissance operation.

Every ground reconnaissance Marine is an infantry man skilled in planning and executing various reconnaissance operations to include specialized limited scale raids, fire support, and operational logistics, and maintenance. In addition to basic infantry skills, these Marines are proficient in combat swimming, small boat operations, refined observation, scouting, patrolling, long-range communications skills, and special insertion and extraction techniques.

All expeditionary ground reconnaissance Marines receive advanced training in the handling, launching, recovering, maintenance, and operations of the CRRC. These Marines possess highly developed skills in field craft and the planning and execution of long-range, precision marksmanship. They plan, execute, and supervise specialized forms of maneuver, including parachuting, combatant diving, and HRST operations. From forward positions, these Marines direct the actions of combat aircraft and other supporting arms engaged in CAS and other offensive operations.

GROUND RECONNAISSANCE PREDEPLOYMENT TRAINING CYCLE

The predeployment training cycle is designed to aid ground reconnaissance units in training to standard all of the T&R tasks as required in NAVMC 3500.55_.

The training cycle provides a Service common standard and allows commanders to certify that their Marines have accomplished all required T&R tasks prior to deploying in support of the MAGTF. Commanders follow the predeployment training programs outlined below as a recommended progression for their Marines. Commanders must remember that for safety and confidence, the crawl-walk-run approach to training should be implemented during all phases of the training cycle.

Commanders at all levels are responsible for effective combat training. Training should be tailored to existing resources. Advancement to more difficult operations will only be conducted when the

officers and SNCOs determine that it is within the element's capabilities. The Marine Corps' training principles should always be adhered to:

- Train as you fight.
- Make commanders responsible for training.
- Use standards-based training.
- Use performance-oriented training.
- Train the MAGTF to fight as a combined arms team.
- Train to sustain proficiency.
- Train to challenge.

INDIVIDUAL TRAINING CYCLE

The ground reconnaissance individual training cycle is optimally six months in duration. This training period focuses on the attainment of individual skills that are necessary for the platoon to be able to conduct its mission essential tasks. (See table B-1.)

The individual training cycle begins 30–50 days upon a platoon's return from a deployment. The cycle ends when the detachment commences the unit training cycle.

Table B-1. Individual Training Cycle.

School	Recommended	Required
Basic Reconnaissance Course (BRC)*		All platoon members
Reconnaissance Team Leaders Course (RTLC)*		All team leaders
Reconnaissance Unit Leaders Course (RULC)*		Platoon sergeant and platoon commander
Combat Life Saver (CLS)*		All platoon members
SERE Level C*		All platoon members
Basic Airborne Course (BAC)*		All platoon members
Static Line Jumpmaster (SLJM)	Four per platoon	Two per platoon
Multi-Mission Parachutist Course (MMPC)*	All platoon members	Two teams
Military Free Fall Jumpmaster (MFFJM)	Four per platoon	Two per platoon
TORDS Master Equipment/Personnel	One per team	Two per platoon
Marine Combatant Diver Course *	All platoon members	Two teams
Dive Supervisor	Three per platoon	Two per platoon
Helocast Master	Eight per platoon	Four per platoon
Marine Corps Instructor of Water Survival (MCIWS)	One per platoon	None
Joint Fires Observer (JFO)	One per team (Recon Bn)	One per team (Recon Bn)
Joint Terminal Attack Controller (JTAC)	One per team (FORECON) One per platoon (Recon Bn)	One per team (FORECON) One per platoon (Recon Bn)

Table B-1. Individual Training Cycle–Continued.

School	Recommended	Required
Scout Sniper	Two per team	One per team
Pathfinder	One per team	One per platoon
HRST Master	Eight per platoon	Six per platoon
Assault Climber	One per team	One per platoon
Mountain Leaders Course (MLC)	One per team	One per platoon
Dynamic Entry Course	Two per team	One per team
Laser Operators Course	One per team	One per platoon
HMMWV Driver	All platoon members	Nine per platoon
MTVR Driver	One per team	Two per platoon
Ammunition Driver Course	One per team	One per platoon
* DENOTES REQUIRED COURSE.		

UNIT TRAINING CYCLE

At the end of the individual training cycle, the platoon should be fully formed and ready to begin Phases I, II, & III collective unit training. The skills represented in tables B-1 and B-2 define what skills should be resident in the platoon at the termination of individual training to conduct effective, safe, and realistic collective training that will eventually support success while attached to a supported unit.

The ground reconnaissance unit training cycle is optimally 7 months long and is broken into three phases. Each phase builds upon the skills acquired or refreshed in the previous phase. (See table B-2 on page B-4.)

At the onset of the unit training cycle, the platoon should be fully manned. Collective training standards cannot be effectively accomplished without Marines assigned, present for training, and possessing the requisite skills to participate in collective training/FMPs. The focus of this training phase is to allow the platoon to train collective team and platoon skills required to execute ground reconnaissance missions. This phase of training is primarily planned and executed jointly by the platoon and assisted by the company headquarters.

Each training evolution should incorporate skills from previous training evolutions, as applicable. Field training exercises and FMP operations should be built into the training cycle at every possible opportunity.

Mission Rehearsal Exercise (MRX)/MEU Training Cycle: MRX is 30–45 days dependent on global sourcing. The MEU Training Cycle should be 6 months or as required by the gaining unit. This cycle is directed by the gaining commander with the intent of total integration of battalion landing team (BLT)/MEU (or global sourcing) assets, in preparation for a known deployment.

Table B-2. Unit Training Cycle.

PHASE I: INDIVIDUAL/TEAM SKILLS		
Duration	**Event**	**Notes**
2 Weeks	Basic C2 Package	Radios Antennas MSIDs Communications security ROC operations
2 Weeks	Combat Trauma Package	CPR certification Basic life saver Combat trauma medicine Live tissue training
2 Weeks	Weapons and Tactics Package	Small arms Machine guns Sniper rifles Grenades & AT-4 Team and platoon immediate action drills -Patrolling -Raids
2 Weeks	Supporting Arms Package	CAS Mortars and artillery Naval guns Battle damage assessment
2 Weeks	Combat Hunter Package	Tracking Countertracking Observation
PHASE II: PLATOON SKILLS		
Duration	**Event**	**Notes**
2 Weeks	Advanced C2 Package	Team and platoon operation orders Tactical exercise without troops (TEWT) ROC operations
1 Week	HRST Package	Tower and heliborne operations: Fast rope Rappel SPIE Assault climbing
2 Weeks	Amphibious Package	Small boats Combat swimming Helocast Beach reports Launch and recovery from mother craft
2 Weeks	Marine Combatant Diver Package	Refer to app. H, MCD certification requirements
1 Week	Static Line Jump Package	Refer to app. H, parachutist certification requirements
2 Weeks	MFF Jump Package	Refer to app. H, parachutist certification requirements

Table B-2. Unit Training Cycle–Continued.

PHASE III: ADVANCE FORCE OPERATIONS		
Duration	**Event**	**Notes**
2 Weeks	Dismounted Patrol Package (FMP, away from home station)	Ground reconnaissance Ground surveillance Specialized limited scale raids Amphibious reconnaissance Underwater reconnaissance
2 Weeks	Mounted Patrol Package (FMP, away from home station)	HMMWV Internally transportable vehicle ATV
Note: 4 weeks have been left opened for flexibility; administration; maintenance.		

APPENDIX C
MISSION PLANNING
FOLDER, ANNEXES, COORDINATION
CHECKLISTS, AND CONFIRMATION BRIEF

Appendix C will aid ground reconnaissance leaders in the preparation of the mission planning folder, WARNORD, OPORD, FRAGO and annexes to orders; conduct of mission coordination; and development of a confirmation brief.

Note: The examples that are provided are meant to be used as a guide and are not directive in nature. For detailed information on writing OPORD/OPLAN and their associated annexes, see appendix K of MCWP 5-1, Marine Corps Planning Process.

MISSION PLANNING FOLDER

The ground reconnaissance mission planning folder consists of the unit's and patrol's WARNORD, OPORD, FRAGOs (if applicable), and the target folder.

EXAMPLE OF A WARNING ORDER

A warning order is a preliminary notice of an order or action that is to follow. WARNORDs follow a modified five-paragraph OPORD format. For more information on WARNORD format, see appendix A of MCWP 3-11.3, *Scouting and Patrolling*.

Leaders issue WARNORDs as soon as they complete their initial assessment of the situation and available time. Leaders do not wait for more information. They issue the best WARNORD possible with the information at hand and update it as needed with additions to the WARNORD.

CLASSIFICATION

WARNING ORDER
TEAM: CALLSIGN
DTG: 060500ADEC11

1. (U) Situation

   a. (U) Enemy. Insurgents in the province of XX are importing contraband from XX along various routes. The destination for these goods is most often the capital city of XX and XX where both CF and the transitional government are routinely attacked with IEDs and VBIEDs. The provinces of XX and XX are connected by small 2–lane highways and smugglers' routes. The area is also dominated by open terrain which contains unimproved roads and trails which see both military and civilian use. Items being smuggled include weapons, stolen vehicles, people, explosives, and other contraband. CF activity over the last year has caused the insurgents to develop a robust early warning network, triggered when CF leave their firm bases, either by surface or by air, and begin their approach towards a desert smuggling camp: using landline phones, Thuraya satellite phones, calls to prayer, and visual signals. The enemy has become adept at anticipating CF interdiction operations and taking appropriate countermeasures. Indications exists that RPGs and SA-7s were possibly cached in the area. These could be used to shoot down CF air assets responding to possible ambushes or other targets of opportunity along air routes from the nearby enemy controlled airfield.

1

CLASSIFICATION

CLASSIFICATION

b. (U) Friendly. 15th MEU continues to operate in CENTCOM shipping lanes off of the coast of XX preparing for operations ashore in XX Province to provide assistance to support Task Force Yankee which is located at FOB Emperor, in the city of XX. TF Yankee consists of BLT 1/8 (REIN) and a composite squadron of RW assets and C Battery 1/10. TF Yankee has been operating in XX Province for the past year conducting security and stability operations and limited offensive operations.

2. (U) Mission. On 08 Dec, TM 1, 2d platoon, FORECON DET will insert via MFF or LLSL IOT conduct reconnaissance operations in the XX Province IOT locate/confirm/deny the presence of terrorist/smuggling activity in support of future MEU operations. Mission has priority. BPT conduct limited small scale raids. TM 1 will extract on 14 Dec via helicopter.

3. (U) General Instructions

Name	COC	Gen. Org.	Spec. Org.	Duties	Arms, Ammo, Equip.
Doe, John A.	1	A Element	Sniper, EPW search, Demo	TL	ARMS: M-4, M-40, PRC-148, PVS-14, PVS-17, PEQ-4 AMMO: 360 rnds 5.56 ball, 30 rnds 5.56 tracer, 2 frags, 1 smk, 20 7.62 LR, 1 claymore, 1 red smk. EQUIP: ACOG, compass, NATO rep form, E-tool
Doe, John B.	2	B Element	Aid/litter	Assistant team leader (ATL)	ARMS: M-4, M-79, PRC-148, PVS-14, PVS-17 AMMO: 360 rnds 5.56 ball, 30 rnds 5.56 tracer, 2 frags, 1 smk, 1 claymore, 1 red smk, six 40-mm HEDP, three 40-mm smk. EQUIP: ACOG, compass, LPL-30, NATO rep form, D-10 camera:
Doe, John C.	3	A Element		Radiotelephone operator (RTO)	ARMS: M-4, PRC-148, PVS-14, PVS-17, AMMO: 360 rnds 5.56 ball, 30 rnds 5.56 tracer, 2 frags, 1 smk, 1 thermite. EQUIP: ACOG, compass, PRC-150, FEAK, CYZ-10, tough book:

CLASSIFICATION

Name	COC	Gen. Org.	Spec. Org.	Duties	Arms, Ammo, Equip.
Doe, John D.	4	B Element		ARTO	ARMS: M-4, PRC-148, PVS-14, PVS-17 AMMO: 360 rnds 5.56 ball, 30 rnds 5.56 tracer, 2 frags, 1 smk, 1 thermite. EQUIP: ACOG, compass, PRC-117, SATCOM antenna:
Doe, John E.	5	A Element	Sniper, EPW search, Demo, Photo/sketch	Point Man	ARMS: M-4, PRC-148, PVS-14, PVS-17, AMMO: 360 rnds 5.56 ball, 30 rnds 5.56 tracer, 2 frags, 1 smk, 1 claymore, six 40-mm HEDP, three 40-mm smk. EQUIP: ACOG, compass, E-tool, Viper with tripod:
Doe, John F.	6	B Element	Aid/litter, EPW search, Photo/ sketch	Scout	ARMS: M-249, Eotech, PVS-14, compass, AMMO: 1,000 rnds 5.56 lnk, 2 frags, 1 smk. EQUIP: Sophie, digital camera:

a. (U) Gear Common to All

(1) (U) Body

(a) (U) Boonie cover.

(b) (U) Watch (alarms off).

(c) (U) Cammie blouse: serviceable, compass dummy corded in top left breast pocket

(d) (U) Cammie trousers: serviceable, with belt or suspenders.

(e) (U) Fixed blade knife: optional.

(f) (U) Boots: serviceable with good tread and laces.

(g) (U) Fanny pack: with patrol log, pencil, ID card, fire starter (lighter), ear pro, cammi paint, folding knife, all sensitive written material, blood chit.

(h) (U) All TM members must carry on person: map, protractor, alcohol pens, and cheat sheets.

CLASSIFICATION

(2) (U) LBV

(a) (U) Riflemen: 12 magazines 5.56mm–clean and serviceable. SAW gunner: 2 drums 5.56mm linked–stacked and silenced.

(b) (U) Web belt: optional, all pouches will be attached using 550 cord or zip ties.

(c) (U) Canteens: Minimum of 2 quarts of water will be carried on LBV. Water is for E&E purposes only and will only be consumed in an emergency.

(d) (U) All personnel will have the ability to carry the following items on their LBV: 1 small signal panel, 1 IR Strobe, 1 MBTR radio with antenna and headset, 2 frag grenades, 1 smoke grenade, IFAK with 2 rolls of Kerlex, 2 tourniquets, 1 cravat, and an E&E kit suitable for the area of operation.

(3) (U) Rucksack

(a) (U) Team members will carry a mountain rucksack or equivalent. The rucksack will be serviceable to include the frame.

(b) (U) All team members will carry NATO report formats, weapons cleaning gear, poncho, poncho liner, minimum of 2 green, red, and IR chemlights, personal camouflage netting, and sling rope in addition to their mission essential items.

b. Time Schedule

When	What	Where	Who
06 DEC			
0600	Team PT	COMPANY AREA	ALL
0700	PT recovery	COMPANY AREA	ALL
0730	Form logistical request, prep non-mission essential items, cover SOP with team	PLANNING AREA	ALL
0900	Receive OPORD and communications plan	COMPANY CP	TL
1000	Prep overlay, Falcon View, fire support, prep EDL	PLANNING AREA	PT, GUNNER, TL
1000	Prep comm gear	COMM SHOP	RTO, ARTO, SCT
1045	Submit logistical request and timelines	COMPANY CP	ATL
1200	Chow	PLANNING AREA	ALL
1300	Submit RFIs	COMPANY CP	GUNNER
1300	Lay out TM hide site	PLANNING AREA	TL, PT, SCT
1400	Draw logistical gear, prep resupply bundle	COMPANY CP	ATL, SCT

CLASSIFICATION

When	What	Where	Who
1445	Initial Inspections: men, wpns, equip	PLANNING AREA	ALL
1500	Rehearsals: priority of rehearsals	PLANNING AREA	ALL
	Actions on Enemy Contact: staggered column/ wedge-front, rear, right, left. Hasty ambush, near/ far ambush, break out drill, sniper drill, indirect fire, linear danger area, flares, aircraft.		
	Actions at Danger Areas: large/small open, linear		
	Actions at short halts/long halts/patrol base/ORP		
	Actions on the DZ during insert/ Actions on the LZ during extract		
	Actions when making a hide site		
2000	Rehearsals: Priority of rehearsals	PLANNING AREA	ALL
2300	Rest Plan	PLANNING AREA	ALL
07 DEC			
0730	Prepare terrain model	PLANNING AREA	PT, GUNNER, SCT
0745	Submit EDL, overlays, route plans	COMPANY CP	TL
0800	Initial comm checks	PLANNING AREA	RTO, ARTO
1030	Team OPORD	PLANNING AREA	ALL
1300	Chow	PLANNING AREA	ALL
1330	Rehearsals: Priority of rehearsals	PLANNING AREA	ALL
	Actions at the ORP/OBJ		
	Actions when making a Hide Site		
	Actions during link up		
1530	Mission brief backs	PLANNING AREA	ALL
2000	Rehearsals: Priority of rehearsals	PLANNING AREA	ALL
	Actions on Enemy Contact: staggered column/ wedge-front, rear, right, left. Hasty ambush, near/ far ambush, break out drill, sniper drill, indirect fire, linear danger area, flares, aircraft		
2300	Rest Plan	PLANNING AREA	ALL
08 DEC			
0730	Draw armory gear, pack mission essential gear	ARMORY/PLANNING AREA	ALL
0900	Final comm checks	PLANNING AREA	ALL
1000	Final inspection/ brief backs	PLANNING AREA	ALL
1100	Chow	PLANNING AREA	ALL
1200	Jump brief and pre-jump training	PLANNING AREA	ALL
1400	Final brief backs	PLANNING AREA	TL
1500	At CAL SITE 23	LZ	ALL

5

CLASSIFICATION

CLASSIFICATION

When	What	Where	Who
1530	Suit up	LZ	ALL
1700	Pilot's brief	LZ	ALL
1800	INSERT	TBD	ALL

4. (U) Specific Instructions

a. (U) Pointman. Prep overlay, Falcon View, fire support plan. Construct terrain model. Write orientation/situation for OPORD. BPT brief RTE, KRP, evasion and recovery (E&R) plan. Prep TM hide site kit for field.

b. (U) Scout. Aid pointman with overlay, Falcon View, fire support plan. Construct terrain model. Write orientation/situation for OPORD. BPT brief orientation/situation. Prep, turn in, and track TM's RFIs. Prep TM med bag for field.

c. (U) RTO. Prep comm equip for field use, op check all communications equipment, conduct initial/final communications checks. Write command and signal for OPORD. BPT brief communications plan, no communications plan, and command/signal.

SAMPLE OF A OPERATION ORDER

An OPORD is a directive issued by a commander to subordinate commanders/leaders for the purpose of effecting the coordinated execution of an operation. After briefing the OPORD, the leader issues annexes for amplifying instructions.

Note: The examples that have been provided are meant to be used as a guide based on mission/operational requirements and are not directive in nature. For detailed information on order writing, see appendix K of MCWP 5-1.

To ensure efficiency and set the baseline for the remainder of the order, commanders ask the reconnaissance teams/platoons if there are any questions.

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OPERATION ORDER (Number) (Operation CODE WORD) (U)

OPERATION ORDER (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Orientation

   a. (U) Countries Involved

   b. (U) Units Involved

      (1) (U) Ground combat element (GCE)

      (2) (U) Aviation combat element (ACE)

CLASSIFICATION

(3) (U) Logistic combat element (LCE)

(4) (U) Indigenous

c. (U) Overall Concept of Operations

(1) (U) Location of reconnaissance area of operation

(2) (U) Key terrain features

(3) (U) Insert, objective, extract

(4) (U) Location of safe areas

d. (U) General Time Frame

(1) (U) Time of departure/time of return

(2) (U) No later than (NLT) times

e. (U) Patrol Position in Overall Scheme of Operations

(1) (U) Patrol's unit objective

(2) (U) Supported unit's objective

2. (U) Situation

a. (U) Orientation

(1) (U) Geology

(2) (U) Inland hydrographic

(a) (U) Fresh water sources in AO

(b) (U) Water barriers in AO

1 (U) Depth of water barriers

2 (U) Effects on patrol

CLASSIFICATION

(3) (U) Vegetation: effects on patrol

(a) (U) Known

(b) (U) Suspected

(4) (U) Inhabited areas/populace

(a) (U) Customs

(b) (U) Courtesies

(5) (U) Indigenous support

(a) (U) Food

(b) (U) Water

(c) (U) Shelter

(6) (U) Hazards

(a) (U) Plant/animals

(7) (U) Topography (KOCOA)

(a) (U) Key terrain

(b) (U) Observation/fields of fire

(c) (U) Cover and concealment

(d) (U) Obstacles

(e) (U) Avenues of approach

(8) (U) Weather: effects on patrol

CLASSIFICATION

(9) (U) Map and chart reference data

	Day-1	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
BMNT							
SR							
SS							
EENT							
MR							
MS							
% ILLUM							
TEMP-HI							
TEMP-LOW							
HUMIDITY							
PRECIP							
CEILING							
WINDS							
VISIBILITY							
TIDES-HI							
TIDES-LOW							
CURRENTS							
WATER TEMP							
SURF							

b. (U) Enemy Forces

(1) (U) Size

(2) (U) Activity

(3) (U) Location

(a) (U) Known

(b) (U) Suspected

(4) (U) Unit identification

(5) (U) Time last seen

CLASSIFICATION

(6) (U) Equipment

(a) (U) Weapons

(b) (U) CBRN

(c) (U) Night vision

(d) (U) Vehicles

(e) (U) Other

(7) (U) Probable COA

(a) (U) Defend, reinforce, attack, withdraw, delay

(b) (U) Most likely COA/most deadly COA

(8) (U) Support/reinforcement capabilities

(9) (U) Morale/motivation

c. (U) Friendly Forces

(1) (U) Higher

(a) (U) Location

(b) (U) Mission

(2) (U) Adjacent

(a) (U) Location

(b) (U) Mission

(3) (U) Supporting units: general or direct

(a) (U) Helicopter

(b) (U) Fixed wing

CLASSIFICATION

(c) (U) Naval

(d) (U) Artillery

(e) (U) Mortars

(f) (U) CASEVAC

3. (U) Mission. Mission or time has priority. Who, what, where, when, why.

4. (U) Execution

a. (U) Commander's Intent

b. (U) Concept of Operation

(1) (U) Scheme of maneuver

(a) (U) Formations, route, checkpoints, objectives

(2) (U) Fire support plan

(a) (U) Fire support available

1 (U) Indirect fire: unit, frequencies, call sign, target number, location, and description.

2 (U) Aviation: type, alert, frequencies, call sign, IP/BP.

(b) (U) Fire support request procedures

1 (U) Indirect fire

2 (U) Aviation

(c) (U) Priorities of fires

1 (U) Indirect fire: general/direct

2 (U) Aviation: general/direct

CLASSIFICATION

c. (U) Task of Subordinate Units

(1) (U) Individual. Alpha and Bravo.

(a) (U) Insert

(b) (U) En route

(c) (U) ORP

(d) (U) OP

(e) (U) OBJ

(f) (U) Extract

(2) (U) Subteams. EPW, search, aid/litter, demolitions, sketch, sniper.

(a) (U) Insert

(b) (U) En route

(c) (U) ORP

(d) (U) OP

(e) (U) OBJ

(f) (U) Extract

d. (U) Coordinating Instructions

(1) (U) Actions in the objective area

(a) (U) Leader's reconnaissance

1 (U) Five point contingency plan

(b) (U) Occupation of the ORP

(c) (U) Actions in the ORP

CLASSIFICATION

(d) (U) Movement to the objective

(e) (U) Actions on the objective

(f) (U) Tasks of key individuals

(g) (U) Signals and control measures

(h) (U) Withdrawal to ORP

(i) (U) Dissemination of the information

(j) (U) Alternate plan

(k) (U) Estimated time on the objective

(l) (U) Actions for enemy contact: at ORP, at OBJ, return to ORP

(2) (U) Order of movement

(a) (U) Formations

(b) (U) Interval

(c) (U) Weapons conditions

(3) (U) Primary/alternate route

CHECK POINT	LOCATION	DESCRIPTION	AZIMUTH/DISTANCE

(4) (U) Depart/reentry friendly lines

(5) (U) Actions on enemy contact: front, rear, right, left, near/far ambush, indirect fire, sniper fire, minefield/ boobytrap, flares, air attack, hasty ambush.

(6) (U) Actions at danger areas: linear, small open, large open.

CLASSIFICATION

(7) (U) Actions at halts: short, long

(8) (U) Actions at patrol base

(9) (U) Essential elements of information

(10) (U) Other informational requirements

(11) (U) ID friend or foe

(12) (U) Linkup plan: team, platoon, recovery forces

(13) (U) Evasion and escape plan

(14) (U) Rules of engagement

(15) (U) Destruction plan

(16) (U) Actions on compromise: passive, active

(17) (U) Abort authority/abort criteria

(18) (U) Rehearsals: times, uniform, priority

(19) (U) Inspections: times, uniform

(20) (U) Test fire: time, location, uniform, priority of weapon systems

5. (U) Administration and Logistics

a. (U) Rations

(1) (U) Type

(2) (U) Amount

b. (U) Water

(1) (U) Amount

(2) (U) Purification means

CLASSIFICATION

c. (U) Wounded

(1) (U) CASEVAC criteria

(2) (U) CASEVAC procedures

(3) (U) Casualty report procedures

(4) (U) Dissemination of mission essential gear

d. (U) Enemy Procedures

(1) (U) Handling dead/wounded

(2) (U) Captured documents/equipment

(a) (U) Tagging

(b) (U) Photographing

(c) (U) Destroying

(d) (U) Carrying

(3) (U) Indigenous personnel

e. (U) Ammunition and Pyro

(1) (U) Type/amount

(2) (U) Location

(3) (U) Pyro signal plan

f. (U) Resupply Plan: see annex

g. (U) Special Equipment

(1) (U) Type/location

CLASSIFICATION

6. (U) Command and Signal

a. (U) Chain of Command

(1) (U) Location

(a) (U) En route/at OBJ

b. (U) Signal

(1) (U) Frequencies

(a) (U) SATCOM

(b) (U) HF

(c) (U) VHF

(2) (U) Challenge and reply

(a) (U) Day

(b) (U) CH/RPY

(c) (U) Number combo

(d) (U) Running

(3) (U) Crypto change

(a) (U) When

(b) (U) What

(4) (U) Net priority

(5) (U) Communications windows

(6) (U) Monitoring status/reporting priority

CLASSIFICATION

(7) (U) Brevity words/prowords

(a) (U) Event

(b) (U) Code word

(c) (U) Net

(8) (U) Hand and arm signals

(9) (U) Linkup signals

(a) (U) Day/night

(b) (U) Far/near

(c) (U) Primary, alternate, tertiary

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SAMPLE OF A FRAGMENTARY ORDER

A FRAGO is issued after an OPORD to change, modify, or execute a branch or sequel to that order. Fragmentary orders follow the OPORD format, but seldom include all five paragraphs. For extensive changes, the leader normally issues a new OPORD.

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OPERATION ORDER (Number) (Operation CODE WORD) (U)
FRAGMENTARY ORDER (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation

   a. (U) Enemy

   b. (U) Friendly

2. (U) Mission (include the new or modified mission statement)

3. (U) Execution

   a. (U) Commander's Intent

   b. (U) Maneuver

   c. (U) Fires

   d. (U) Intelligence and Electronic Warfare

1

CLASSIFICATION

CLASSIFICATION

e. (U) Individual Tasks

f. (U) Coordinating Instructions

4. (U) Administration and Logistics (include if changes are needed)

5. (U) Command and Signal (include if changes are needed)

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SAMPLE OF A TARGET FOLDER

The target folder is generated by the G-2/S-2 and contains specific information about the target, target area, or AO.

SECTION I. TARGET IDENTIFICATION AND DESCRIPTION

A) Target/Objective Identification Data

B) Description and Significance

C) Detailed Target/Objective Description

D) Target Vulnerability Assessment

SECTION II. NATURAL ENVIRONMENT

A) Geographic Data (including terrain and hazards to movement)

B) Meteorological Data (climatology overview, tables, and illumination data)

C) Hydrographic Data (coastal, waterway, lakes, luminescence, etc.)

SECTION III. THREAT

A) Ground Forces

B) Paramilitary and Indigenous Forces (including intelligence, security, and police services)

C) Naval Forces (including coast guard and maritime border guard)

D) Air Forces

E) Air Defense Forces (including radars, passive detectors, and C2)

F) Electronic Order of Battle

G) Space-based Assets

H) Counterintelligence Environment (efforts of indigenous forces to collect against R&S forces)

I) Other

SECTION IV. DEMOGRAPHICS AND CULTURAL FEATURES

A) Area Population Characteristics

B) Languages, Dialects, and Ethnic Composition

C) Social Conditions

D) Religious Factors

E) Political Characteristics

F) Economic Conditions

G) Miscellaneous (currency, holidays, dress, customs, etc.)

SECTION V. LINES OF COMMUNICATIONS AND INFORMATION SYSTEMS

A) Airfields

B) Railways

C) Roadways

D) Waterways

E) Ports

F) POL

G) Power Grid

H) Public Information Media and Telecommunications (print, radio, television, telephone, etc.)

SECTION VI. INSERTION AND EXTRACTION (This includes potential DZs, LZs, recover zones, seaward launch and recovery points, and beach landing sites.)

A) Potential Zones

B) Choke Points Between Insertion Points and Objective

SECTION VII. SURVIVAL, EVASION, RESISTANCE, ESCAPE, RECOVERY DATA

A) SAFE Data

B) SAFE Area Intelligence Description Data

C) Survival Data

SECTION VIII. UNIQUE INTELLIGENCE

A) Mission Specific Requirements Not Covered Above

SECTION IX. INTELLIGENCE SHORTFALLS

APPENDIX A. IMAGERY

APPENDIX B. MAPS AND CHARTS

APPENDIX C. SENSITIVE COMPARTMENTED INFORMATION (if applicable.)

PATROL ANNEXES

A patrol annex is designed to provide amplifying information for a specific task within the OPORD. Patrol annexes are designed to plan for deliberate tasks within an operation that are complex in nature and require extensive coordination and rehearsal. There are several patrol annexes that are inherit to certain types of operations and, therefore, should only be used when conducting those specific operations. However, some annexes are designed for either deliberate or contingency operations and must be planned into every operation conducted.

Annexes follow the five-paragraph format and any information already covered in the OPORD does not need to be repeated here, unless the situation has changed or will be vastly different during the phase of the operation covered in the annex. The following are examples of the most common patrol annexes used during ground reconnaissance operations.

Note: The following annexes are commonly used in planning ground reconnaissance patrols at the company level and below and are not standard OPORD annexes. As such, they are designated an Annexes R through Y per MCWP 5-1, which states: "additional annexes may be added, when necessary, when information must be included where no provision is made in standard annexes. When included, letter additional annexes consecutively, beginning with the letter 'R' and 'Y'."

Sample of an Aerial Movement Annex

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ANNEX R OPERATION ORDER (Number) (Operation CODE WORD) (U)

AERIAL MOVEMENT ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation
   a. (U) Enemy Situation
   b. (U) Friendly Situation (including units supporting the operation)
2. (U) Mission
3. (U) Execution
   a. (U) Concept of Operation
   b. (U) Subunit Missions
      (1) (U) Element
      (2) (U) Team
      (3) (U) Individual

1

CLASSIFICATION

CLASSIFICATION

c. (U) Coordinating Instructions

(1) (U) Time aircraft available and location of PZ

(2) (U) Organization of movement

(3) (U) Station time (plan for those who are unable to load due to time constraints)

(4) (U) Landing zone

(a) (U) Location: primary/alternate

(b) (U) Marking: near/far; primary/alternate/tertiary

d. (U) Flight Route to Landing Zone

(1) (U) General flight path

(2) (U) Checkpoints

(3) (U) Time hacks

e. (U) Formations

(1) (U) At pickup zone

(2) (U) En route

(3) (U) At landing zone

f. (U) Actions on Enemy Contact

(1) (U) En route

(2) (U) At landing zone

g. (U) Rehearsals

CLASSIFICATION

h. (U) Assembly Area

(1) (U) Grid location

(2) (U) Terrain reference point

(3) (U) Marking

(4) (U) Assembly area formation

4. (U) Administration and Logistics

5. (U) Command and Signal

a. (U) Signal

(1) (U) Air/ground call signs and frequencies

(a) (U) Call signs

1 (U) Aircraft

2 (U) Patrol

(b) (U) Frequencies

(c) (U) VHF: primary/alternate

(d) (U) UHF: primary/alternate

(2) (U) Air/ground emergency code

(3) (U) Brevity codes

b. (U) Command

(1) (U) Location of patrol leader in air and at landing zone

(2) (U) Location of assistance patrol leader in air and at landing zone

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Rank and Service
Title
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Sample of an Aerial Resupply Annex

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ANNEX S OPERATION ORDER (Number) (Operation CODE WORD) (U)

AERIAL RESUPPLY ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation
   a. (U) Enemy Situation
   b. (U) Friendly Situation (including units supporting the operation)
2. (U) Mission
3. (U) Execution
   a. (U) Concept of Operation
   b. (U) Subunit Missions (command, security, marking, recovery/transport)
      (1) (U) Element
      (2) (U) Team
      (3) (U) Individual

1

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c. (U) Coordinating Instructions

(1) (U) Flight route to landing zone

(a) (U) General flight path

(b) (U) Checkpoints

(c) (U) Communication check point (CCP)

1 (U) Location

2 (U) Marking

3 (U) Report time

4 (U) Heading from CCP to DZ

(d) (U) Drop zone

1 (U) Location: primary/alternate

2 (U) Marking: near/far; primary/alternate/tertiary

(e) (U) Drop information

1 (U) DTG of resupply: primary/alternate

2 (U) Code letter at DZ (i.e., NATO "Y")

3 (U) Length of DZ

4 (U) Procedures/marking for aborting resupply drop

d. (U) Formations, Altitude, and Airspeed

(1) (U) En route

(2) (U) At drop zone

CLASSIFICATION

e. (U) Actions on Enemy Contact

(1) (U) Before, during, after resupply operation

f. (U) Rehearsals

g. (U) Actions at DZ

(1) (U) Before, during, after resupply operation

h. (U) Coordination with Pilots

(1) (U) Time, location, essential personnel

4. (U) Administration and Logistics

5. (U) Command and Signal

a. (U) Signal

(1) (U) Air/ground call signs and frequencies

(a) (U) Call signs

1 (U) Aircraft

2 (U) Patrol

(b) (U) Frequencies

1 (U) VHF: primary/alternate

2 (U) UHF: primary/alternate

(2) (U) Long-range visual signals

(3) (U) Short-range visual signals

(4) (U) Emergency procedures and signals

(5) (U) Air drop communication procedures

CLASSIFICATION

(6) (U) Code letter at DZ

b. (U) Command

(1) (U) Location of patrol leader at DZ

(2) (U) Location of assistant patrol leader at DZ

(3) (U) Location of patrol members not involved in resupply

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4

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Sample of a Communications Annex

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ANNEX T OPERATION ORDER (Number) (Operation CODE WORD) (U)

COMMUNICATIONS ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.
(U) TIME ZONE

1. (U) Situation

   a. (U) Enemy Situation

      (1) (U) Weather and terrain that may affect communications

      (2) (U) Electronic warfare capabilities

      (3) (U) Direction finding capabilities

   b. (U) Friendly Situation (including units supporting the operation)

2. (U) Mission

3. (U) Execution

   a. (U) Plan and Location for Long-Range Communication Site (ORP)

   b. (U) Communications Windows that are Planned to be Missed

      (1) (U) DTG of windows planned to be missed

1

CLASSIFICATION

CLASSIFICATION

c. (U) Patrol No Communications Plan

d. (U) Security Plan for Communication Windows

e. (U) Priority of Reporting

(1) (U) Reports and patrol members responsible for generating the reports

f. (U) Specific Instructions to Patrol Members

(1) (U) Before, during, and after communications windows

g. (U) Destruction Plan

4. (U) Administration and Logistics

a. (U) Radios

(1) (U) Location and who is responsible for them

b. (U) Batteries

(1) (U) Location and who is responsible for them

c. (U) Antenna Kits

(1) (U) Location and who is responsible for them

d. (U) MSIDS

(1) (U) Location and who is responsible for them

5. (U) Command and Signal

a. (U) Location of Key Personnel During Communications Windows

b. (U) Frequencies and Times

(1) (U) Primary/alternate/guard

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c. (U) Azimuths and Addresses

d. (U) Execution Check List

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Sample of a Link Up Annex

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ANNEX U OPERATION ORDER (Number) (Operation CODE WORD) (U)

LINK UP ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation
   a. (U) Enemy Situation
   b. (U) Friendly Situation
2. (U) Mission
3. (U) Execution
   a. (U) Concept of Operation
   b. (U) Subunit Missions
      (1) (U) Element
      (2) (U) Team
      (3) (U) Individual

1

CLASSIFICATION

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c. (U) Coordinating Instructions

(1) (U) Time of link up (include actions if time is missed)

(2) (U) Location of linkup site

(3) (U) Rally points

(4) (U) Actions on enemy contact (include before, during, after linkup)

(5) (U) Actions on friendly contact (if fired upon)

(6) (U) Actions at the linkup site

(7) (U) Actions following link up

(8) (U) Rehearsals

(9) (U) Restrictive fire lines

(10) (U) Coordination with unit conducting link up

(11) (U) Time, location, and key personnel for coordination

4. (U) Administration and Logistics

5. (U) Command and Signal

a. (U) Signal

(1) (U) Call signs and frequencies

(2) (U) Recognition and code words

(a) (U) Long-range signal: primary/alternate/tertiary

(b) (U) Short-range signal: primary/alternate/tertiary

(c) (U) Link up complete

(3) (U) Challenge and passwords

2

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(4) (U) Execution check list

(5) (U) No communications plan

b. (U) Command

(1) (U) Location of patrol leader during link up

(2) (U) Location of assistance patrol leader during link up

(3) (U) Location of other key personnel

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Sample of a Patrol Base Annex

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ANNEX V OPERATION ORDER (Number) (Operation CODE WORD) (U)

PATROL BASE ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation
   a. (U) Enemy Situation
   b. (U) Friendly Situation
2. (U) Mission
3. (U) Execution
   a. (U) Concept of Operation
   b. (U) Subunit Missions
      (1) (U) Element
      (2) (U) Team
      (3) (U) Individual

1

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CLASSIFICATION

c. (U) Coordinating Instructions

(1) (U) Occupation plan

(2) (U) Operations plan

(a) (U) Security plan

(b) (U) Alert plan

(c) (U) Priorities of work

(d) (U) Evacuation plan

(3) (U) Locations of tentative rally points (if enemy contact is made)

4. (U) Administration and Logistics

5. (U) Command and Signal

a. (U) Signal

(1) (U) Call signs

(a) (U) Elements

(b) (U) Team

(c) (U) Other (higher, adjacent, supporting, etc.)

(2) (U) Frequencies

(a) (U) VHF: primary/alternate

(b) (U) UHF/ SATCOM: primary/alternate

(c) (U) HF

(3) (U) Brevity words/prowords

(4) (U) Emergency signals (if enemy contact is made)

2

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b. (U) Command

(1) (U) Location of key personnel

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Sample of a Small Boat Annex

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ANNEX W OPERATION ORDER (Number) (Operation CODE WORD) (U)

SMALL BOAT ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation

   a. (U) Enemy Situation

      (1) (U) Weather

         (a) (U) Tide, surf, wind, sea state

      (2) (U) Terrain

         (a) (U) River width and river depth (if applicable)

         (b) (U) Current

         (c) (U) Water temperature

         (d) (U) Vegetation

         (e) (U) Air temperature

1

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(3) (U) Enemy forces

(a) (U) Identification, location, activity, and strength

b. (U) Friendly Situation

(1) (U) Unit furnishing support (if applicable)

(2) (U) Attachments and detachments (if applicable)

2. (U) Mission

3. (U) Execution

a. (U) Concept of Operation

b. (U) Organization of Movement

c. (U) Subunit Missions. Load equipment, secure equipment, security, etc.

(1) (U) Elements

(2) (U) Team

(3) (U) Individual: coxswain, assistant coxswain, boat team duties, etc.

d. (U) Coordinating Instructions

(1) (U) Formations and order of movement

(2) (U) Route and alternate route

(3) (U) Method of navigation: primary/alternate

(4) (U) Actions on enemy contact: en route, at objective, on return

(5) (U) Rally points

(6) (U) Embarkation plan

(7) (U) Debarkation plan

(8) (U) Rehearsals

2

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(9) (U) Cache instructions

(10) (U) Type of insertion

(a) (U) Day/night

(b) (U) Admin/tactical

(c) (U) OTH/line of sight

(d) (U) Single leg/multiple leg

(11) (U) Total distance

(12) (U) Latitude/longitude of calculated release point

(13) (U) Latitude/longitude of insert point

(14) (U) Distance/direction/estimated speed for each leg

(15) (U) Latitude/longitude for recovery point

(16) (U) Navigational aids

(a) (U) Type/location/signal/bearing

(17) (U) Calculated offset

(a) (U) Ship to shore

(b) (U) Halfway to shore

(c) (U) Three quarters to shore

(18) (U) Time schedule

(a) (U) Boat/engine operational checks

(b) (U) Boat preparation

(c) (U) Man the crane/stern gate/positions

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(d) (U) Boats in the water

(e) (U) Feet dry

(f) (U) Link up with mother craft

(19) (U) Type of initial terminal guidance provided by scout swimmers

(20) (U) Bump plan

(a) (U) Prior to launch

(b) (U) Dead in water—ship to halfway point

(c) (U) Dead in water—halfway point to insert point

(d) (U) Dead in water—halfway point to link up with mother craft

(e) (U) One engine down—ship to halfway point

(f) (U) One engine down—halfway point to insert point

(g) (U) One engine down—halfway point to link up with mother craft

(h) (U) No communications/visual signals

(i) (U) Fire

(j) (U) Fuel leak

(21) (U) Actions on compromise

4. (U) Administration and Logistics

a. (U) Rations (chow/water)

b. (U) Arms and Ammunition

c. (U) Uniform and Equipment

(1) (U) Method of distribution of paddles and life jackets

4

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(2) (U) Disposition of boats, paddles, and life jackets upon debarkation

d. (U) Method of Handling Friendly Dead and Wounded

e. (U) Method of Handling EPWs

f. (U) Boat Survival Kits

5. (U) Command and Signal

a. (U) Signal

(1) (U) Signals to be used between boats

(a) (U) Boat call signs

(b) (U) Element leader call signs

(c) (U) Mother craft call sign

(2) (U) Signals to be used within boats

(3) (U) Brevity words/prowords

(a) (U) Feet dry

(b) (U) Link up between boats

(c) (U) Link up with mother craft

(d) (U) Compromise

(e) (U) Boat in distress

(f) (U) Swimmers on shore

(4) (U) Emergency signals

(a) (U) On boats

(b) (U) On shore

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(5) (U) Frequencies: primary/alternate

(6) (U) Communications check schedule

b. (U) Command

(1) (U) Location of key personnel on boats

(2) (U) Location of key personnel on shore

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Sample of a Stream Crossing Annex

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ANNEX X OPERATION ORDER (Number) (Operation CODE WORD) (U)

STREAM CROSSING ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation

   a. (U) Enemy Situation

      (1) (U) Weather

         (a) (U) Tide, surf, wind (if applicable)

      (2) (U) Terrain

         (a) (U) River width and river depth (if applicable)

         (b) (U) Current

         (c) (U) Water temperature

         (d) (U) Vegetation

1

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(e) (U) Obstacles

(f) (U) Air temperature

(3) (U) Enemy Forces

(a) (U) Identification, location, activity, and strength

b. (U) Friendly Situation

(1) (U) Unit furnishing support (if applicable)

(2) (U) Attachments and detachments (if applicable)

2. (U) Mission

3. (U) Execution

a. (U) Concept of Operation

b. (U) Subunit Missions (load equipment, secure equipment, security, etc.)

(1) (U) Elements

(2) (U) Team

(3) (U) Individual: coxswain, assistant coxswain, boat team duties, etc.

c. (U) Coordinating Instructions

(1) (U) Crossing procedures

(2) (U) Security

(3) (U) Order of crossing

(4) (U) Actions on enemy contact: en route, at objective, on return

(5) (U) Alternate plan

2

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(6) (U) Rally points

(7) (U) Rehearsals

4. (U) Administration and Logistics

5. (U) Command and Signal

a. (U) Signal

(1) (U) Signals used during crossing

b. (U) Command

(1) (U) Location of key personnel during crossing

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Sample of a Vehicle Movement Annex

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ANNEX Y OPERATION ORDER (Number) (Operation CODE WORD) (U)

VEHICLE MOVEMENT ANNEX (U)

(U) REFERENCES: List maps, charts, SOPs, or other documents essential to understanding the order or plan.

(U) TIME ZONE

1. (U) Situation
   a. (U) Enemy Situation
   b. (U) Friendly Situation
2. (U) Mission
3. (U) Execution
   a. (U) Concept of Operation
   b. (U) Subunit Missions
      (1) (U) Elements
      (2) (U) Teams
      (3) (U) Individuals

1

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c. (U) Coordinating Instructions

(1) (U) DTG of departure and return

(2) (U) Coordination: who, what, when, where

(a) (U) S-4/G-4

(b) (U) Convoy commander

(c) (U) Security force commander

(d) (U) Vehicle hardening: how

(3) (U) Loading and order of movement

(4) (U) Route: primary/alternate

(5) (U) Air support

(6) (U) Actions on enemy contact

(a) (U) Sniper

(b) (U) Air: fixed-wing and rotary-wing

(c) (U) Near ambush

1 (U) Road blocked

2 (U) Road not blocked

(d) (U) Indirect fire

1 (U) Mortar

2 (U) Artillery

3 (U) Naval gun fire

2

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(e) (U) Mechanical ambush

1 (U) Minefields

2 (U) Command detonated mines

3 (U) IED

(7) (U) Actions at halts

(a) (U) Short

(b) (U) Long

(8) (U) Actions at the dismount point

(9) (U) Rehearsals

4. (U) Administration and Logistics

a. (U) Rations (Chow/water)

b. (U) Fuel

c. (U) Spare POL

d. (U) Tools, Spare Tires, and Spare Parts

e. (U) Medical Equipment

f. (U) Fire and Rescue Equipment

5. (U) Command and Signal

a. (U) Signal

(1) (U) Signals to be used between vehicles

(a) (U) Vehicle call signs

(b) (U) Element leader call signs

CLASSIFICATION

(2) (U) Hand and arm signals to be used between vehicles

(3) (U) Emergency signals

(4) (U) Escalation of force procedures

(5) (U) Blue Force Tracker role names

(6) (U) Frequencies: primary/alternate

(7) (U) Communications check schedule

b. (U) Command

(1) (U) Location of key personnel during movement

(2) (U) Location of key personnel during halts

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CLASSIFICATION

COORDINATION CHECKLISTS

Coordination checklists are used to inform supporting units of the platoon's/team's mission and their role in that mission. Coordination checklists are essential in the detailed planning between the supported unit and the supporting unit. When unlike units operate together they are unfamiliar with each other's TTP; therefore, it is imperative that detailed planning for the operation and contingencies that may surface during that operation are disseminated to all pertinent parties. The following pages contain examples of coordination checklists used during ground reconnaissance operations.

Sample of an Adjacent Unit Coordination Checklist

1. Mission and size of the patrol.
2. Routes: primary/alternate.
3. Fire support plan and control measures.
4. Challenge and reply passwords.
5. Any information on enemy forces in the AO.
6. Planned times and points of departure/re-entry.
7. Frequencies and call signs.
8. Pyrotechnics plan.

Sample of an Aerial Movement Coordination Checklist

1. Mission.
2. Location and time of pick up.
3. Loading plan.
4. Fire support.
5. Flight route: primary/alternate.
6. Number and type of aircraft: requested and available.
7. Availability of aircraft for rehearsals.
8. Frequencies and call signs.
9. Marking of DZ.

Sample of an Amphibious Insertion Coordination Checklist

1. Coordinate with inserting unit to establish insert officer.
2. Navigation plan supported by GPS.
3. Weather forecast including wind and sea state.
4. Abort criteria.
5. Abort authority.
6. Abort plan.
7. Emergency plans: medical, enemy contact.
8. Emergency pyrotechnic plan.
9. Personnel and equipment bump plan.
10. Boats rigged properly.
11. Gear secured to boat or body.
12. Waterproofed communications link between boats/shore.
13. Operations manifest by boat located in COC.
14. Safety/bump boats.
15. Location of medical personnel.
16. Time and location for boat brief.
17. Flotation device: proper fit, operations check, marking device.
18. Day/night flare per man.
19. Operational equipment properly waterproofed and dummy corded.
20. Marshalling area control officer (MACO) designated in each boat.

Sample of a Communications Coordination Checklist

1. Types of radios needed for the mission.
    a. Operational check all radios.
        (1) Plain text and encrypted.
        (2) With and without field expedient antennas.
    b. Extra handsets (as needed).
    c. Determine battery expenditure for each radio.
        (1) Determine number of batteries needed for each radio.
        (2) Test batteries with altimeter.
    d. Degree of waterproofing (including handsets) needed for mission.
        (1) Determine waterproofing gear needed.
        (2) Dunk test all waterproofed equipment.
    e. SATCOM.
        (1) Up link/down link.
        (2) Azimuth.
        (3) Elevation.
2. What crypto is needed for the mission?
    a. Challenge and reply passwords for duration of mission.
    b. Brevity words/prowords and shackle sheets in use.
    c. AKAC-874 transmission authentication on local or ZULU time.
    d. NATO report formats match between patrols and ROC/SARCC.
3. Frequencies and call signs.
    a. Conduct propagation study and environmental effects on communications.
    b. Net frequencies for supporting and supported units.
        (1) TAD, TAR, FSC, TAC.

c. DTG and procedures for frequency changes.

d. What is the monitoring/reporting status for each station.

e. Net priority.

f. Time and length of reporting windows.

(1) For each unit.

(2) For entire mission duration.

g. Polarity of ROC antennas.

(1) Azimuth from objective/ORP to ROC and SARCC.

4. Field Expedient Antenna Kit (FEAK).

a. Wire and wire cutters.

b. Cobra heads.

c. Coaxial cables.

d. Insulators and resistors.

e. Electrical tape.

f. Grounds.

g. Cheat sheets.

5. Field expedient antennas cut to length (if applicable).

a. Select best field expedient antennas for mission.

b. Field expedient antennas labeled.

(1) Day/night.

(2) Primary/alternate.

6. MSIDS.

a. Operational check of all components.

b. Operational check of supporting programs.

7. Visual signal plan and supporting pyrotechnics.
8. No communications plan.
9. Time and location for communication plan briefing.

Sample of a Fire Support/Close Air Support Coordination Checklist

1. Air liaison officer.
    a. Arrange visual reconnaissance.
    b. Close air support.
        (1) Initial points/attack points.
        (2) Frequencies and call signs.
        (3) Aircraft and capabilities.
    c. Insertion and extraction mission numbers.
    d. Submit patrol route overlay.
    e. Pilot coordination: who, what, when, where.
2. Fires support cell officer.
    a. Artillery.
        (1) Submit patrol route overlay.
        (2) Submit and confirm on-call targets.
        (3) Frequency and call signs.
        (4) Ammunition and uses available.
        (5) Priority of fires.
    b. Naval gunfire.
        (1) Submit patrol route overlay.
        (2) Submit and confirm on-call targets.
        (3) Frequency and call signs.
        (4) Ammunition and uses available.
        (5) Priority of fires.

Sample of a Forward Unit Coordination Checklist

1. Size of patrol.
    a. Time and location of departure/re-entry.
    b. Location of initial rally point (IRP).
2. General area of operation.
    a. Information on terrain and vegetation.
3. Known or suspected enemy positions and obstacles.
    a. Possible enemy ambush sites.
    b. Latest enemy activity.
4. Detailed information on friendly positions.
    a. Fire and barrier plan.
5. Support the unit can provide.
    a. Fire support.
    b. Litter teams.
    c. Guides.
    d. Quick reaction force.
    e. Other.
6. Brevity words/prowords.
7. Frequencies and call signs.
    a. Pyrotechnic plan.
    b. Challenge and reply passwords.
    c. Emergency signals.
8. Ensure information is passed on to the relieving unit.

Sample of a Helicopter Insertion/Extraction Coordination Checklist

1. Insert/extract officer.
    a. Two copies of manifest.
        (1) Name, rank, SSN, blood type.
    b. ICS for insert officer and patrol leader.
    c. Time of take off.
    d. Time on station.
    e. Insert/extract time.
2. Primary and alternate active insert/extract zones.
    a. LZ number and name.
    b. Location.
    c. Landmarks.
    d. Altitude.
    e. Obstructions.
    f. Number and location of dummy drops.
3. Organization and flight formations.
    a. Orientation and mission of door guns.
    b. Coordinate routes with TRAP commander.
4. Actions.
    a. Enemy contact en route.
    b. Enemy contact at insert/extract.
    c. Aircraft emergency.
        (1) Fire.
        (2) Engine failure.

(3) Crash on land.

(4) Crash on water.

5. Communications.

a. Frequencies: VHF, UHF.

b. Encryption.

c. Call signs.

d. Brevity words/prowords.

e. ITG.

6. Special equipment.

a. Floatation devices.

b. Helicopter rope suspension equipment.

(1) 120 ft rope(s).

(2) Chopping blocks.

(3) Gunner's belts.

(4) Padding material.

(5) Fast rope(s).

(6) SPIE line.

(7) Cargo straps.

(8) Type IV connectors.

(9) Schlomer frame.

Sample of an S-2 Coordination Checklist

1. Area of operations.
    a. Weather/light data.
    b. Astronomical/hydrographic data.
    c. Maps/charts needed.
    d. Terrain.
        (1) Insert point.
        (2) Routes.
        (3) Target area.
2. Intelligence updates.
    a. Size.
    b. Activity.
    c. Location.
    d. Unit.
    e. Time.
    f. Equipment.
    g. Electronic warfare capabilities.
    h. Enemy weapon and equipment capabilities/images.
    i. Partisan activity.
3. Confirm IRs, SIRs, CCIRs.
4. Confirm mission.
5. Confirm target folder information.
6. Confirm E&R data.

7. Coverage area.
    a. Imagery of BLS, LZ, DZ, etc.
    b. Sensors in AO.
    c. Terrain models.
    d. Blue prints.
8. Coordinate debrief.
    a. Time, location, debriefer(s).

Sample of an S-3 Coordination Checklist

1. Submit kill sheet.
2. Submit route overlay.
3. Friendly situation update.
    a. Higher.
    b. Adjacent.
    c. Supporting.
4. Coordinate reconnaissance AOs and effective times.
5. Coordinate passage/reentry of friendly lines.
6. Confirm linkup procedures with other units.
7. Confirm COC procedures.
8. Coordinate insertion and extraction.
9. Coordinate rehearsal areas.
10. Confirm mission.
11. Confirm rules of engagement.

Sample of a Vehicle Movement Coordination Checklist

1. Name and location of supporting unit (if applicable).
2. Location of pick up point.
    a. Loading and departure time.
3. Preparation of vehicles for movement.
    a. Driver responsibilities.
    b. Patrol responsibilities.
4. Time and location.
    a. Vehicle preparation.
    b. Rehearsals.
5. Location of de-truck points.
6. Number and types of vehicles.
7. Routes: primary/alternate.
8. Frequencies and call signs.
9. Actions.
    a. Enemy contact.
    b. Vehicle emergencies.
    c. Driver and crew at insert/extract point.

CONFIRMATION BRIEF

Given the high levels of risk associated with the employment of ground reconnaissance assets, commanders will require confirmation briefs prior to authorizing their employment. These briefs will allow all units and staff sections involved to fully comprehend the mission, and support requirements of ground reconnaissance units. The ground reconnaissance unit leader must be capable of fully communicating his plan, planning considerations, and support requirements needed to the commander.

Typically, the ground reconnaissance commander will receive inputs from ground reconnaissance patrols for the confirmation brief, but the commander is responsible for building and briefing the confirmation brief to the supported commander. Below is an example of a ground reconnaissance confirmation brief.

1. Title slide (include classification of brief).

2. Orientation slide.

3. Weather/illumination slide.

4. Enemy situation/threat assessment slide.

5. Higher headquarters' mission slide.

6. Mission and intent slide (including purpose, method, and end state).

7. Task organization slide.

8. Concept of operations slide (include "Big Blue Arrow" depiction of insertion, infiltration, actions on the objective, exfiltration, and extraction).

9. Employment considerations slide (weather, elevation, illumination, threat, compromise, weight, duration, etc.).

10. Load plan slide.

11. Phase I slide (insertion).

12. Phase II slide (infiltration: includes primary/alternate routes).

13. Phase III slide (actions on the objective: includes projected coverage of the objective area).

14. Collections priorities slide (confirm understanding of CCIRs, PIRs, SIRs and prioritize/ assess feasibility of collection).

15. Critical tasks slide

16. Phase IV slide (exfiltration: includes primary/alternate routes).

17. Phase V slide (extract).

18. Timeline slide (depicts expected time of key events and anticipated duration of "eyes on the objective").

19. NO GO/abort criteria slide.

20. Special equipment slide (articulate unique capabilities being employed during this mission).

21. Sniper engagement plan slide.

22. Fire support plan slide.

23. Reinforcement plan slide.

24. Medical plan slide.

25. Emergency extract slide.

26. Missing Marine plan slide.

27. Evasion plan of action slide.

28. Actions on compromise slide (active and passive).

29. No communications plan slide.

30. Logistics/sustainment slide.

31. Command slide (ROC succession/patrol succession).

32. Signal slide.

33. Operations risk management slide.

APPENDIX D
EVASION AND RECOVERY

Evasion is the process whereby people isolated in hostile or unfriendly territory avoid capture and return to areas under friendly control, either with or without aid, as the result of plans, operations, and individual actions by recovery planners, conventional or unconventional forces, and sometimes the evaders themselves. Evasion is considered the highest form of resistance. Both evasion and recovery are integral to military operations.

CODE OF CONDUCT. ARTICLE II

I will never surrender of my own free will. If in command, I will never surrender the members of my command while they still have the means to resist.

FUNDAMENTALS

The operations officer and the ground reconnaissance unit commander, with assistance from the joint search and rescue center, are responsible for and should be prepared to conduct personnel recovery operations in support of ground reconnaissance operations.

The operations officer coordinates with the rescue coordination center (RCC), advising them when ground reconnaissance patrols might have to evade a threat. The operations officer relays information such as ISOPREP cards and an EPA along with overlays of the evasion corridor. After the operations officer coordinates with other evasion planning agencies, he might determine that the unit must make its own evasion plans.

The operations officer and the ground reconnaissance unit commander begin by identifying the patrol's evasion corridor and form an evasion annex with the assistance of the joint search and rescue center. For more information, refer to JP 3-50, *Personnel Recovery,* and MCRP 3-02H, *Multi-Service Tactics, Techniques, and Procedures for Survival, Evasion, and Recovery.*

Conduct of evasion and recovery (E&R) operations requires Marines to understand each kind of operation and the laws that govern them. The Code of Conduct and the Law of Land Warfare list the responsibilities of the evader and the escapee in an evasion. Marines participating in an evasion operation are classified as one of the following:

Evader

An evader is considered a lawful combatant for the duration of the evasion, since evasion is an extension of combat and a refusal to capitulate to the enemy. Evaders are obliged by the Code of Conduct to do all they can to avoid capture and rejoin friendly forces. If needed, they may commit

acts of violence against legitimate military targets, without being prosecuted by the enemy for violating local criminal laws.

Escapee

An escapee is someone who has escaped from a confinement facility. Escapees are noncombatants, no longer able to commit hostile acts, who may be charged under the laws of the detaining power for certain acts committed against its military or civilian population during escape or avoidance of recapture. An escapee may not carry weapons or try to arm themselves. If he commits crimes of no military significance, he may be tried and punished for war crimes by the detaining country and his own.

The POW have a national obligation to escape and rejoin their own forces. Those apprehended during or after escape are subject to disciplinary punishment only. This assumes that any offences they may have committed were for the sole purpose of escaping, and that the offences entail no violence against life, limb, or the goal of self-enrichment.

Neutral Countries

An evader who crosses into a neutral country is subject to detention by that country for the duration of the war. A neutral country that receives evaders/escapees may leave them at liberty. If the country allows them to remain in its territory, it may assign them a place of residence. The neutral country is also authorized to confiscate all equipment of the evader/escapee.

CHAIN OF COMMAND

The agencies, units, and individuals within the E&R chain of command are responsible for the successful planning for and execution of E&R operations.

Times to initiate E&R—

- On order of the commander.
- When considered “isolated personnel” by individual unit standards or SOPs.

Joint Personnel Recovery Agency

The Joint Personnel Recovery Agency (JPRA) develops joint E&R TTP; E&R aids; tools; and specialized equipment for E&R. Additionally, they also provide expertise on E&R and survival to all Services.

Joint Search and Rescue Center

The joint search and rescue center represents two or more services or countries. They coordinate recovery efforts among joint Services. They develop and distribute the ATO SPINS. They maintain ISOPREP cards for missing personnel.

Rescue Coordination Cell

A RCC is located at each Service in the theatre of operation. The RCC notifies the joint search and rescue center of isolated personnel. They help individual units develop their own EPA. They maintain a copy of ISOPREP cards for isolated personnel. They coordinate recovery efforts for that Service.

Individual Units

Each unit is responsible for developing an EPA and for ensuring that all personnel properly fill out their ISOPREP cards. The unit is responsible for keeping the cards updated, storing them in a secure location, and forwarding copies to the RCC.

Individual Marines

Each Marine is responsible for knowing the EPA, filling out their ISOPREP cards, and being familiar with their individual ISOPREP information. Initial training for E&R situations begins at Marine Corps Recruit Training. Ground reconnaissance Marines are required to complete SERE training Level C. After SERE Level C qualification, Marines should continue to perform refresher and advanced training on a continuous basis to maintain proficiency.

EVASION AND RECOVERY PLANNING

Personnel assigned to ground reconnaissance units are considered high-risk-of-capture and subject to isolation in hostile territory. Therefore, they should prepare for the possibility of being in an evasion situation. Successful evasion is dependent on detailed planning as well as peacetime training and proficiency in survival and E&R TTP.

The operations officer and the ground reconnaissance unit commander, with assistance from the RCC and the joint search and rescue center, are responsible for and prepared to conduct personnel recovery operations in support of ground reconnaissance operations.

The operations officer and the ground reconnaissance unit commander begin by identifying the patrols' AO and formulating an evasion annex with the assistance of the joint search and rescue center. When ground reconnaissance patrols are preparing to enter a possible evasion situation, the operations officer coordinates with the RCC and relays information such as ISOPREP cards and the unit's EPA (with overlays) of the AO. After the operations officer and the ground reconnaissance unit commander coordinate with evasion planning agencies, they may determine that their unit must make an independent EPA.

The ground reconnaissance patrol begins planning for E&R after receiving the EPA and the E&R annex to the OPORD along with any evasion aids that will assist them in the planning phase.

After receiving area briefings and examining E&R area studies, the patrol formulates their detailed EPA, normally an annex to the patrol's OPORD, and briefs it to the commander. The patrol requests all available evasion aids that will assist them during an evasion. The patrol members review their ISOPREP cards before departing the planning facility to begin the insertion phase.

RECOVERY

The two types of combat recovery of isolated personnel are conventional and unconventional. (See fig. D-1 on page D-5.)

Conventional Recovery

There are three types of conventional recovery:

- Unassisted recovery by isolated personnel requires evasion back to friendly lines.
- CSAR uses available personnel recovery assets, controlled and initiated by the JPRA, to recover the isolated personnel.
- On-scene assets already in the AO, such as aviation, ground, or naval forces can recover the isolated personnel.

Unconventional Recovery

Unconventional recovery includes planned assisted recovery, unplanned assisted recovery, and clandestine aircraft support:

- Planned assisted recovery can be accomplished using SOF, guerillas, or clandestine organizations that are already operating in the AO.
- Unplanned assisted recovery occurs when opportunists perform unplanned recoveries in hope of receiving a reward for their actions. Civilians may perform acts of mercy when evaders need medical attention. At other times, those sympathetic to the cause may also provide unplanned assistance.
- Clandestine aircraft support operations are conducted in a manner which assures secrecy or concealment of forces while the operation is being conducted. In war, the emphasis on secrecy is primarily for self-protection and surprise.

When an evader's location is known precisely, is within flying range of helicopters and/or fixed-wing aircraft, and the enemy threat is sufficiently low, a single, specially equipped, clandestinely operated aircraft can be used to carry out a recovery. This aircraft should avoid enemy detection, quickly enter the enemy-controlled area, recover the evader, and return to friendly control. Helicopters with an air refueling capability, night vision devices, and terrain following radars make this a viable option.

For clandestine long-range recovery, one option would be to employ the fixed-wing Fulton Recovery System and appropriate aircraft, also known as the STAR system. This system is air dropped to an evader on the ground or in the water. The evader activates the system and is recovered.

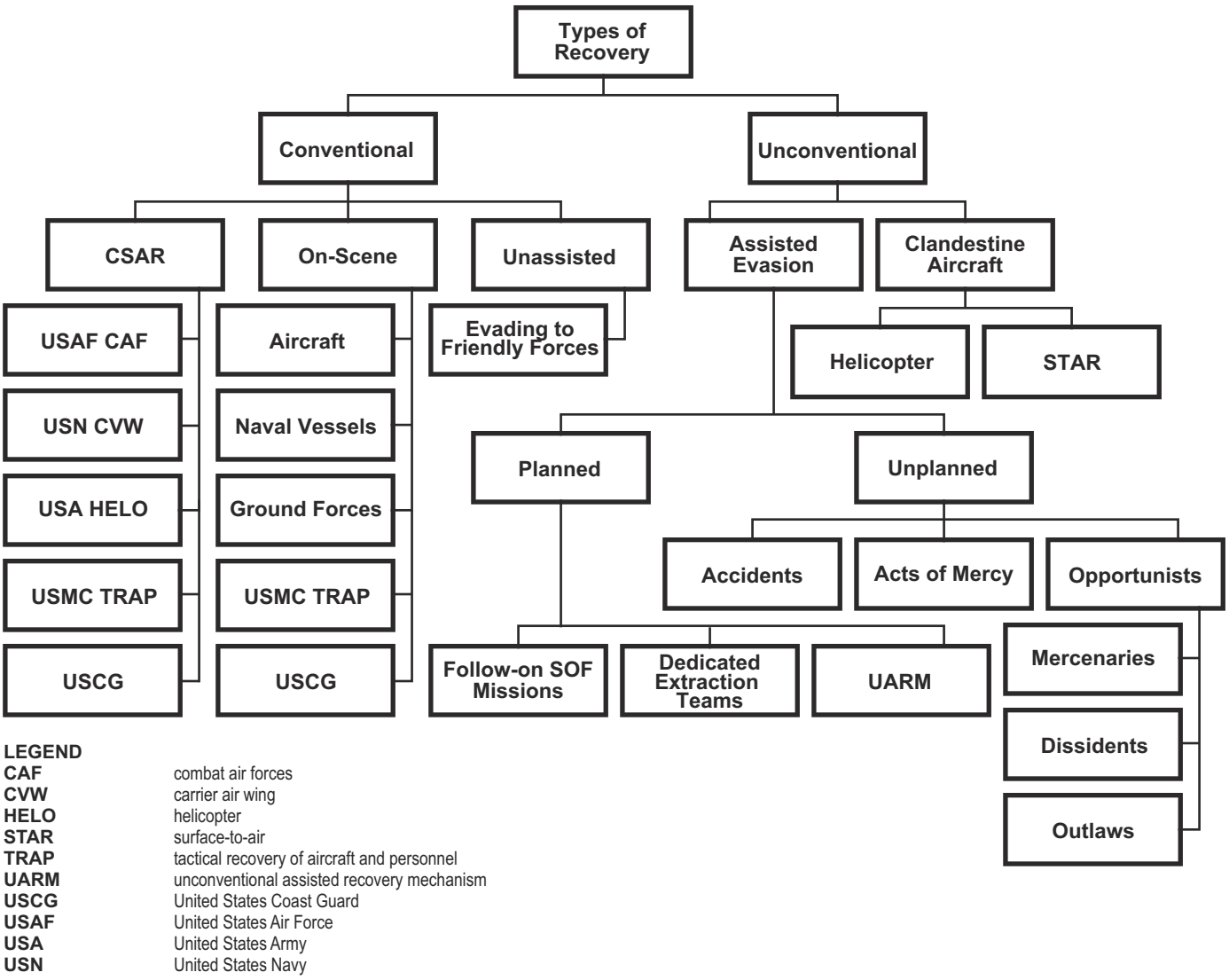

Figure D-1. Types of Recovery.

CLASSIFICATIONS OF EVASION

CODE OF CONDUCT. ARTICLE III

If I am captured, I will continue to resist by all means available. I will make every effort to escape and aid others to escape. I will accept neither parole nor special favors from the enemy.

In a short-range evasion, the evader is close to the main battle area and becomes isolated. The evader usually has the means to return to the unit within a few days.

In an extended evasion, which involves greater distances from friendly controlled areas, the evader might have to travel an extended distance through foreign terrain, possibly with little food and equipment. Ground reconnaissance patrols generally fit into this group.

One major factor that has led to more successful evasions than any other is the individual's WILL to survive. Marines in an E&R and survival situation will be subjected to many physical and mental hardships. These hardships are compounded if detailed area studies are not conducted during the planning phase and if Marines have limited survival skills. Characteristics of a successful extended evasion include—

- *Knowledge of the AO*. Study of the AO and a detailed E&R EPA are critical to success.
- *Knowledge of Survival*. These skills should be reinforced in the unit with thorough survival and evasion classes. Like most perishable skills, survival training should be a regular training task.
- *Supply Economy*. Limiting use and making the best use of available supplies.
- *Endurance*. The physical and mental conditioning of individuals and ground reconnaissance team members will largely determine the ability to successfully execute E&R.
- *Patience and Discipline*. Recovery may not be immediate. Individuals should be prepared to evade for days, weeks, months, or even years. Patience and discipline are often traits acquired through tough and realistic training.

For more information on survival, refer to MCRP 3-02H, *Multi-Service Tactics, Techniques, and Procedures for Survival, Evasion, and Recovery.*

MOVEMENT

Marines conducting evasion must be familiar with and extremely proficient in the application of individual and patrol tactical movement, natural camouflage, sensory awareness, observation skills, individual survival, tracking and countertracking techniques, field craft, and land navigation in any operational environment. For more information, refer to MCRP 3-02H.

Movement

The patrol may evade by whatever technique they have as a SOP, such as moving as a whole element or by breaking up into two or three groups. There are advantages and disadvantages for each technique that must be considered.

Rate of Movement. A rate of movement is established that allows the patrol to achieve goals outlined in the E&R plan. Moving as fast as possible is seldom the preferred technique. Some of these goals include—

- *Progress*.The patrol moves to the terrain feature/location goals established in the E&R plan. They measure progress on the ground by the hole-up areas that are reached. They are flexible and make adjustments to the E&R plan based on METT-T considerations.
- *Steal*th. Although progress is extremely important, care should be taken so that the patrol is not rushed. Speed should not be substituted for security without being calculated.
- *Energy Conservation*. Along with assisting in stealth, the slower the patrol moves, the more energy patrol members will conserve, and the longer they will be physically capable of evasion.

- *Camouflage and Concealment.* Crucial at all times during evasion and must not be sacrificed when moving or when stationary.
- *Tracking and Countertracking*. During the course of the evasion, tracking and countertracking techniques should be employed. In conjunction with these techniques, other aspects such as route selection, physical condition, and other special considerations will greatly affect the routes taken and the way the evasion is conducted.

Route Selection. Route selection is critical when conducting evasion operations. Avoid all major built-up areas with high traffic. Route selection should consider the following:

- *Obstacles*. Manmade and natural obstacles will be encountered throughout the evasion corridor. Obstacles not only restrict movement, but they also funnel movement. However, some obstacles may serve as navigation aids for the evader as well as aid in movement.
- *Mountains and Hilltops*. Use these for navigation, but avoid travelling on them due to silhouetting.
- *Rivers and Streams*. Use as guides and for water resupply, if the water is potable. However, remember that the local populace and enemy forces will use these areas heavily.
- *Roads or Trails*. Avoid and never use them for movement.
- *Bridges*. Although these look like the easiest and fastest way across water and other obstacles, they are used for roadblocks and checkpoints. Avoid at all cost.
- *Populated Areas*. Avoid entering populated areas, though if you are being tracked by dogs, traveling near a populated area can throw off your scent.

Physical Condition. The physical condition of the patrol is another deciding factor in how successful the patrol will be during the evasion. Consideration include—

- Cross load equipment so that everyone is carrying an equal load. This is essential when dealing with casualties.
- The team is only as fast and as strong as their weakest or slowest man.
- The goal is to be recovered by friendly forces. At times, it may be necessary to cache equipment in order to assist the patrol in evading.

Special Considerations. Special considerations include—

- Knowing how the locals feel about your cause.
- Blending in with the natives; knowing and following their customs, habits, and courtesies.
- Knowing local curfews.
- Remembering that pets and livestock will compromise your location.

Disguises

The use of disguises has been discouraged due to the belief that if captured you could possibly be executed as a spy or for treason. This is not far from the truth. However, the following are ways that you may use a disguise to your advantage:

- *Enemy Uniforms*. It is a violation of international law to make improper use of the uniform of the enemy. It is however, permissible, for military personnel isolated in hostile territory to use the enemy's uniform to assist in evading capture, as long as no other military operations are carried out while so attired.
- *Civilian Clothing*. It is a violation of international law to kill, injure, or capture the enemy by feigning civilian status. As with the military disguise, you should avoid conducting operations that might be defined as either military or espionage. Even if the evader is within their legal rights to use the clothing to help him evade, he might, if captured, have to identify himself as an American. If partisans are aiding his evasion, then he could be treated as one of them and tried for acts of treason. Every Marine must keep their ID card and blood chit on their person.
- *Protected Emblems*. The only disguises unauthorized for use in escape or evasion are protected emblems such as those of medical, religious, or relief agencies.
- *Identification*. According to the Geneva Convention, all Marines involved in armed conflict must keep control of their ID card and ID tags at all times.
- *Local Currency*. Marines are strongly discouraged from carrying any type of payment for helpers, partisans, or individuals otherwise sympathetic to their cause. Higher echelons control payment to partisans and patrols should not be concerned with these matters.

Evasion Aids

Evasion aids are easily accessible to ground reconnaissance units, as long as the unit knows where to request them. Available evasion aids and how to requisition them:

Isolated Personnel Report (DD Form 1833). This is the most important source of authentication data in the United States and in some allied countries. (See fig. D-2 on page D-7.) When filled out, it becomes a classified document. Instructions for completing the ISOPREP are found in Annex F to Appendix K of JP 3-50. When an individual enters an evasion mode, the ISOPREP should be forwarded to the RCC to assist in recovery.

Blood Chits. The blood chit is a small piece of material imprinted with an American flag, control numbers in each corner, and a statement in English and numerous other languages (spoken by the indigenous populace in the AO). The chit identifies the bearer as an American and promises a reward to any individual(s) who helps him return to friendly control.

The presenter of the blood chit may either tear the control number off one of the corners or write the control number on another piece of paper. When the blood chit number is presented to friendly authorities and the claim has been properly validated, it represents an obligation by the US Government to provide compensation to the claimant for services rendered to the evader.

Blood chits are available through the JPRA. The JPRA is the office of primary responsibility for policy and authorizing the production, distribution, and use of blood chits. The National

Geospatial-Intelligence Agency maintains the capability to produce and reprint blood chits at the request of the combatant commander as coordinated through the JPRA.

Pointie Talkie. Distributed by the JPRA, Pointie Talkies are a simple method of communicating with the indigenous population. Each English phrase has the same phrase in various languages printed next to it. The user simply points to the phrase that they want translated.

The main disadvantage to this product is the same as the blood chit; you have to make contact with people in order to use it. Literacy is also a problem that might arise among the local populace.

Evasion Charts. Evasion charts are actually a series of eight 1:250,000 scale joint operations graphic charts. These charts are usually printed four to a side. The chart is overprinted with a camouflage pattern suitable for area terrain and includes an American flag that allows the evader to identify themselves.

An evasion chart combines standard navigation charts and includes evasion and survival information in the margins. The charts typically provide information on local navigation; survival medicine; environmental hazards; personal protection; water and food procurement; and photos of edible and poisonous plants and wildlife.

The evasion chart is waterproof and can provide a make-shift shelter in an emergency. It folds small enough to fit into a cargo pocket or flight suit. If evasion charts are unavailable, tactical pilot charts (1:500,000 scale) may be substituted. NIMA distributes evasion charts.

Selected Area for Evasion Intelligence Description. The selected area for evasion intelligence description is an in-depth study of all-source evasion designated to help in recovering military personnel from a SAFE under hostile conditions. Distributed by the Defense Intelligence Agency for training and real-world contingencies, the selected area for evasion intelligence description includes—

- A 1-to-1:50,000 scale map of the AO.
- Colored photographs of contact points within the SAFE.
- Possible LZs, PZs, and terrain surveys.
- Survival information.
- A chart that shows average rainfall by month, high and low temperatures, and any other information about the AO that the evader might find useful.

Air Tasking Order Special Instructions. The joint search and rescue center develops the ATO SPINS using information that will allow recovery to be conducted with the least amount of problems possible. The ATO SPINS include—

- Points of contact for personnel recover incident reports.
- Communications report.
- Color of the day.
- Number of the day.

- Codeword of the day.
- Letter of the day.
- Search and rescue point.

Evasion Plan of Action. Ground reconnaissance units and their HHQ develop the EPA and the E&R Annex, not the individual ground reconnaissance patrols. The RCC will assist in the development of the EPA. All units operating in or over hostile territory should develop an EPA or review their existing EPA each time a designated target or AO changes.

Speed of recovery depends on how closely everyone involved follows the EPA. Responsibility for properly preparing for and planning the evasion rests with the potential evaders. The headquarters element supports planning through the development of an EPA and an E&R Annex, the patrol develops the plan, and joint theatre assets support the recovery effort.

Successful evasion depends on detailed planning (including contingency plans, and initiation mechanisms) and incorporates information from available reference sources. The EPA provides critical information to the recovery force, such as the scheme of maneuver. The EPA format has six mandatory and five optional components.

Mandatory Components

- Identification:
  - Name, rank, and kill number for each patrol member.
  - Mission number.
  - Patrol call sign or identifier.
  - Patrol member positions.
  - Call sign suffix.
  - Other information as required.
- Planned flight or travel routes:
  - Describe routes for both ingress and egress.
  - In-flight emergency plans for each leg of the mission.
- Evasion actions and intentions for first 48 hours, uninjured:
  - Compare evasion to resupply and continuation of the mission.
  - Plan for evading alone, in small groups, or with entire patrol.
  - Plan travel, including such factors as distance, duration, and speed.
  - Plan intended actions and length of stay at initial rally point(s).
- Evasion actions and intentions for first 48 hours, injured:
  - Plan for treatment of the wounded or self-aid.
  - Considerations for movement techniques.
  - Litters, canes, crutches, etc.
  - Rate of movement.
- Evasion actions and intentions after 48 hours:
  - Routes, plans to destination.
  - Actions and intentions at potential contact or recovery locations.

  - Contact and recovery point signals, signs, or procedures.
  - Contingency plans.
- Communication and authentication:
  - Code words.
  - Bona fides.
  - Color or letter of the day, month, or quarter.
  - Challenge or password and any number combinations.
  - Available communications and signaling devices (day/night, near/ far).
  - Primary communication schedule procedures and frequencies.
  - Alternate communication schedule procedures and frequencies.

Optional Components

- Weapons and ammunition carried.
- Personal evasion kit items.
- Listing of issued survival kit items.
- Mission evasion preparation checklist.
- Signature of reviewing officer.

EVASION AREAS

Evasion areas within the theater or area of operation are decisive to mission accomplishment should the patrol or individuals become isolated from their unit. Using the evasion area within the study region increases the evader's chance to reunite with friendly forces. For more information, refer to JP 3-50 and MCRP 3-02H.

Selected Area for Evasion

A SAFE is an area within a potentially hostile region where an individual may become isolated and must evade to in order to avoid capture by the enemy. This area will be pre-determined to have the best conditions for evasion and survival opportunities. Within the SAFE, contact points and a recovery site(s) will be designated. An area study of the SAFE will be found in the selected area for evasion intelligence description and should be used when planning for a possible evasion situation.

Designated Areas for Recovery

The DAR can be any size or shape within a potentially hostile region where individuals may become isolated and must evade in order to avoid capture. The DAR is issued when no SAFE is available in the AO or can supplement the SAFE in the area of recovery. An area study will be used similar to the selected area for evasion intelligence description during the planning process. If a DAR is used, contact points are called "recovery points."

SAMPLE OF AN EVASION PLAN OF ACTION

EVASION PLAN OF ACTION

1. GENERAL

Patrol Call Sign_____ DTG Prepared_____

Mission Number_____ Unit_____

POSITION	KILL NUMBER	RANK	NAME	SSN	BLOOD TYPE
Tm Ldr	1-1	SSgt	Doe, John A.	XXX-XX-XXXX	O+
Asst Tm Ldr	1-2	Sgt	Doe, John B.	XXX-XX-XXXX	A+
RTO	1-3	Sgt	Doe, John C.	XXX-XX-XXXX	B-
Asst RTO	1-4	Sgt	Doe, John D.	XXX-XX-XXXX	O-
Point Man	1-5	Sgt	Doe, John E.	XXX-XX-XXXX	AB+
Scout	1-6	Cpl	Doe, John F.	XXX-XX-XXXX	O+

2. PREPARATION

a. _____ Review ISOPREP Cards

b. _____ Review safe area for evasion intelligence description

c. _____ Retain identification card and tags

d. _____ Sterilize Uniform (retain name tape and USMC tape)

e. _____ Ensure that no one is carrying personal effects

f. _____ Perform initial and final inspections on survival kit and equipment

3. IMMEDIATE ACTIONS AFTER BEGINNING EVASION

a. INITIAL EVASION GOALS, FIRST 48 HOURS, INJURED AND UNINJURED:

(1) Think about rally point locations and procedures during insertion, infiltration, actions on the objective (AOO), exfiltration, and extraction.

(2) Patrol internal linkup signals and procedures.

(3) Prepare movement plans, intended actions, and length of stay at rally points and/or linkup points.

b. EVASION MOVEMENT PROCEDURES (GENERAL). (Consider: noise, movement time of day, camouflage, enemy sightings, danger areas, borders, as well as war game and identify other possible contingencies.)

4. EXTENDED EVASION GOALS AFTER 48 HOURS (SPECIFIC)

a. DETRIMENTS TO TRAVEL. (These include difficult terrain, major rivers, heavily populated areas, curfews, mine fields, concealment, weather factors, time of day or night, and time and means of movement.)

b. BORDER SITUATION (if applicable). (State the present condition of border areas, including neutral, friendly, and enemy border. Include coast line areas.)

c. RECOMMENDED TRAVEL ROUTES. (Consider: water sources, concealment, attitude of population, density, terrain, as well as advantages and disadvantages of chosen route.)

d. CBRN CONDITIONS (IF APPLICABLE). (Consider prevailing wind conditions, terrain, enemy capabilities, and war game other possible contingencies.)

e. LIKELY SOURCES OF FOOD AND WATER. (Locations and methods of obtaining food and water to include locations of caches, cache report information, and any planned resupply points.)

f. SITUATION

(1) Enemy:

(a) Describe enemy force deployment.

(b) Counterreconnaissance capabilities.

(c) Search and interrogation techniques.

(d) Expected treatment of POWs.

(e) Recommended resistance techniques.

(2) Friendly:

(a) State which units are operating in or near the mission AO.

(b) List CSAR and recovery assets available.

(c) Partisan and foreign friendly forces in the AO and their recovery capabilities.

(d) Any established conventional or unconventional assisted-evasion networks.

5. SAFE AREA FOR EVASION

a. LOCATION AND CATEGORIES. (Describe general location and categories of safe area for evasion; which area offers the best chance of survival and escape and rescue.)

(1) Describe planned method for making contact with recovery assets or networks.

(2) Cover insertion, infiltration, NAIs/objective area, exfiltration, and extraction.

b. DISTINCTIVE FEATURES (AIR). (Describe distinctive features of areas to enable visual identification from the air. Cover insertion, infiltration, NAIs/ objective area, exfiltration, and extraction.)

c. SIGNIFICANT TERRAIN FEATURES. (Describe significant terrain features to aid in visual identification on the ground. Cover insertion, infiltration, NAIs/ objective area, exfiltration, and extraction.)

d. CONTACT POINT AND PROCEDURES. (Describe designated contact points, contact procedures, intentions at selected areas, and criteria for moving to the next contact point. Cover insertion, infiltration, NAIs/ objective area, exfiltration, and extraction.)

6. SAR CONTACT PROCEDURES

a. THE PRIMARY METHOD AND PROCEDURE FOR CONTACTING THE RECOVERY ELEMENT

(1) Organizations frequency and call sign

(2) Radio type and listening period

(3) Radio type and transmitting period

(4) Ground-to-air signals

(5) Authentication codes (from the ATO SPINS), which may include: color of the day, letter of the day, number of the day, word of the day, bull's eye

(6) Code words

(7) SARNEG and procedures—0 1 2 3 4 5 6 7 8 9

(8) Bona fides

(9) ATO SPINS change over times

(10) Recovery activation signal. (Describe the signal and procedures for its use in detail.)

(11) Load signal. (Describe the signal and procedures for its use in detail.)

(12) Signal placement and times

(13) En route evasion plan prior to the decision point. (Include any actions the aircrew and patrol will take.)

7. ADDITIONAL COMMENTS ABOUT THE PATROL ESCAPE AND RESCUE PLAN

   a. ADDRESS THE FOLLOWING:

      (1) Attitudes

      (2) Intentions

      (3) Local intelligence information

8. ACTIONS REQUIRING YOU TO CONDUCT E&R

9. SURVIVAL EQUIPMENT CARRIED BY PATROL AND INDIVIDUALS. INCLUDE SPECIAL EQUIPMENT

10. EMERGENCY RESUPPLY PLAN

   a. DESCRIBE

      (1) Contents of resupply

      (2) How emergency resupply will be delivered

CONFIDENTIAL (When Blocks 50 - 54 filled in)

ISOPREP

ISOLATED PERSONNEL REPORT (ISOPREP)

PRIVACY ACT STATEMENT

AUTHORITY: 10 U.S.C. Sections 133, 3012, 3051 and 8012; E.O. 9397.
PRINCIPAL PURPOSE(S): To protect recovery forces from enemy entrapment and facilitate the recovery of isolated persons.
ROUTINE USE(S): To be completed by designated personnel subject to isolation due to hostile activity. Contains personal information that maybe used to ensure positive identification. The form will be unclassified/official use only. Blocks 50, 51, 52, 53, 54, 55 and 56 are optional blocks and are only utilized when directed by unit SOP or Service doctrine. When blocks 50, 51, 52, 53, 54, 55, and 56 are completed this form becomes classified CONFIDENTIAL and must be handled appropriately. This form may only be transmitted via mil to .mil email accounts.
DISCLOSURE IS MANDATORY. The information is necessary since it affects the entire personnel recovery process. Exceptions on disclosure are made for government contractors.

SECTION 1 - PERSONAL INFORMATION

1.a. LAST NAME	1.b. FIRST NAME	1.c. M.I.	2. GO BY NAME	3. GENDER	4. GRADE	5. SSN	6. COALITION ID	7. DOB (YYYYMMDD)

8. BRANCH OF SERVICE/AGENCY/DEPT	9. CURRENT UNIT	10. BLOOD TYPE	11. HEIGHT (in.)	12. WEIGHT (lbs.)	13. HAIR COLOR	14. EYE COLOR	15. ETHNIC GROUP

16.a. CITIZENSHIP	b. IF OTHER, SPECIFY:	17. ACCENT	18. RELIGIOUS PREFERENCE	19. BLOOD CHIT NUMBER

20. IDENTIFYING SCARS/MARKS/TATTOOS	21. KNOWN MEDICAL CONDITIONS AND PRESCRIPTIONS

SECTION 2 - UNIFORM DATA

22. SHIRT SIZE:	23. PANT SIZE:	24. HAT SIZE:	25. BOOT TYPE:	26. BOOT SIZE:	27. BOOT WIDTH:

SECTION 3 - TRAINING/CAPABILITY DATA

SERE TRAINING	a. TYPE	b. YEAR (YYYY)	c. MONTH	d. LOCATION /OTHER (Specify)	e. COMMENTS
28. TRAINING 1				/	
29. TRAINING 2				/	
30. TRAINING 3				/	

31. PRIMARY LANGUAGE CAPABILITY	a. LANGUAGE (If Other, specify)	b. READING	c. WRITING	d. SPEAKING	e. COMMENTS

32. OTHER LANGUAGE CAPABILITIES:

SECTION 4 - REINTEGRATION INFORMATION

33. PRIMARY NEXT OF KIN	34. PARENT NO. 1 (Contractors Optional)	35. PARENT NO. 2 (Contractors Optional)
a. NAME:	a. NAME:	a. NAME:
b. ADDRESS:	b. ADDRESS:	b. ADDRESS:
c. CITY:	c. CITY:	c. CITY:
d. STATE / e. ZIP CODE:	d. STATE / e. ZIP CODE:	d. STATE / e. ZIP CODE:
f. TELEPHONE:	f. TELEPHONE:	f. TELEPHONE:
g. SAME AS: ☐ PARENT NO. 1 ☐ PARENT NO. 2		37. HOME OF RECORD (Contractors Optional)

36. CHILDREN AT HOME (Contractors Optional)				a. ADDRESS:
a. NAME(S)	b. DOB(S)	a. NAME(S)	b. DOB(S)	b. CITY:
				c. STATE / d. ZIP CODE:

38. SPECIAL FAMILY SITUATIONS:

SECTION 5 - JPRC/PRCC USE ONLY

39. DATE MISSING (YYYYMMDD)	40. DATE RECOVERED (YYYYMMDD)	41. DATE ENTERED REINTEGRATION (YYYYMMDD)	42. DATE RELEASED TO UNIT CONTROL (YYYYMMDD)

43. NOTES

SECTION 6 - ADDITIONAL INFORMATION

44.a. LEFT FINGERPRINTS (Optional): THUMB:	INDEX:	MIDDLE:	RING:	LITTLE:

44.b. RIGHT FINGERPRINTS (Optional): THUMB:	INDEX:	MIDDLE:	RING:	LITTLE:

44.c. ADDITIONAL INFORMATION

44.d. CONTRACTOR: COMPANY NAME	44.e. COMPANY POINT OF CONTACT

SECTION 7 - PHOTOS

45. FRONT FULL DIGITAL PHOTOGRAPH	46. RIGHT PROFILE DIGITAL PHOTOGRAPH

SECTION 8 - REVIEW INFORMATION

47. DATE COMPLETED (YYYYMMDD)	48. DATE REVIEWED (YYYYMMDD)	49. SIGNATURE

SECTION 9 - PERSONAL AUTHENTICATION INFORMATION
(Note: For the Personal Authentication Statements, Items 50 - 53, please input 4 unique statements from which 4 questions can be derived from each.)

50. (C) PERSONAL AUTHENTICATION STATEMENT NO. 1

51. (C) PERSONAL AUTHENTICATION STATEMENT NO. 2

52. (C) PERSONAL AUTHENTICATION STATEMENT NO. 3

53. (C) PERSONAL AUTHENTICATION STATEMENT NO. 4

54. (C) AUTHENTICATION NUMBER

DD FORM 1833 TEST (V2), MAY 2008

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Figure D-2. Sample of an Isolated Personnel Report.

APPENDIX E
PLANNING AREA FACILITIES AND SITES

The goal of planning with limited access is to allow ground reconnaissance units and detachments an environment without distractions and a reduced risk of mission compromise. Facilities include fixed sites (optimal) or field sites.

FACILITIES

Each ground reconnaissance unit benefits by having access to a secure planning facility. Ideally, the planning facility should have enough space available to allow planning by the required number of ground reconnaissance teams to support operations.

The location and type of facility used depends on availability, security, and deployment requirements; detailed planning is the same, regardless of the facility type.

Once the planning facility is established, the teams conduct detailed mission planning. Access to the teams' facilities is limited to ground reconnaissance leadership and LNOs, commanders, representatives of the G-2/S-2, and others on the access roster.

If available, ground reconnaissance patrols rehearse in a secured area nearby, ideally on terrain similar to the area where they will operate.

FIXED SITE

When available, ground reconnaissance units conduct detailed planning at a fixed site setup to emulate their planning facilities at home base. (See fig. E-1 on page E-2.)

Sleeping Areas

Ideally, each sleeping area is equipped with electricity, heating and air conditioning (if possible), cots, and hygiene facilities.

Planning Areas

Ideally, each planning area should be large enough for a ground reconnaissance team to plan the mission. It should have a place where the team can post all mission-essential information, a sand table, separate bins for classified and unclassified trash, RFI logs, a time schedule, and an access roster. (See fig. E-2 on page E-2.)

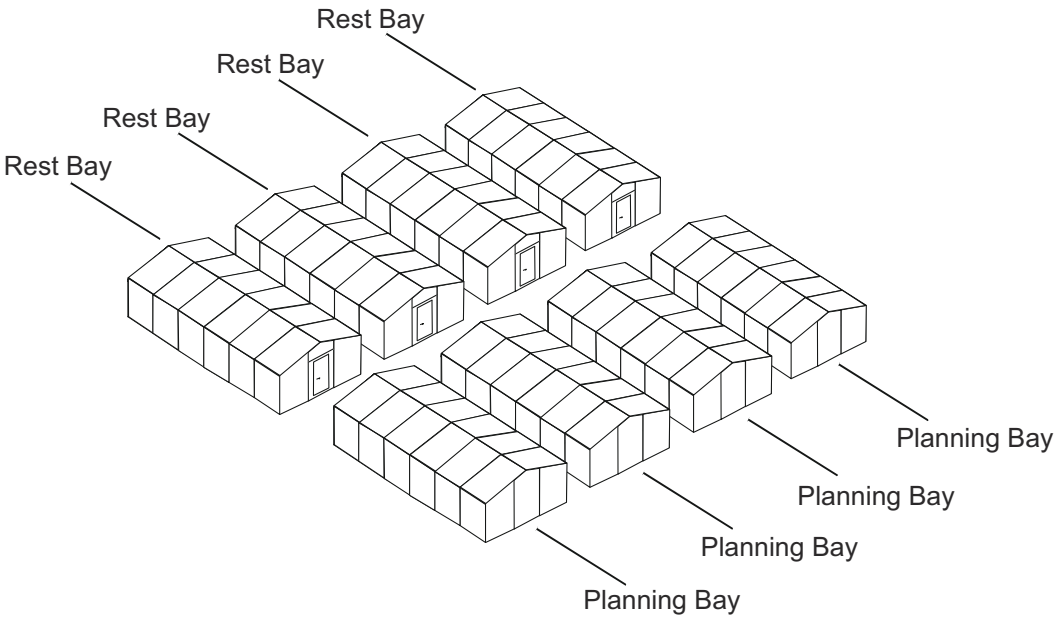

Figure E-1. Fixed Planning Site at the Home Base.

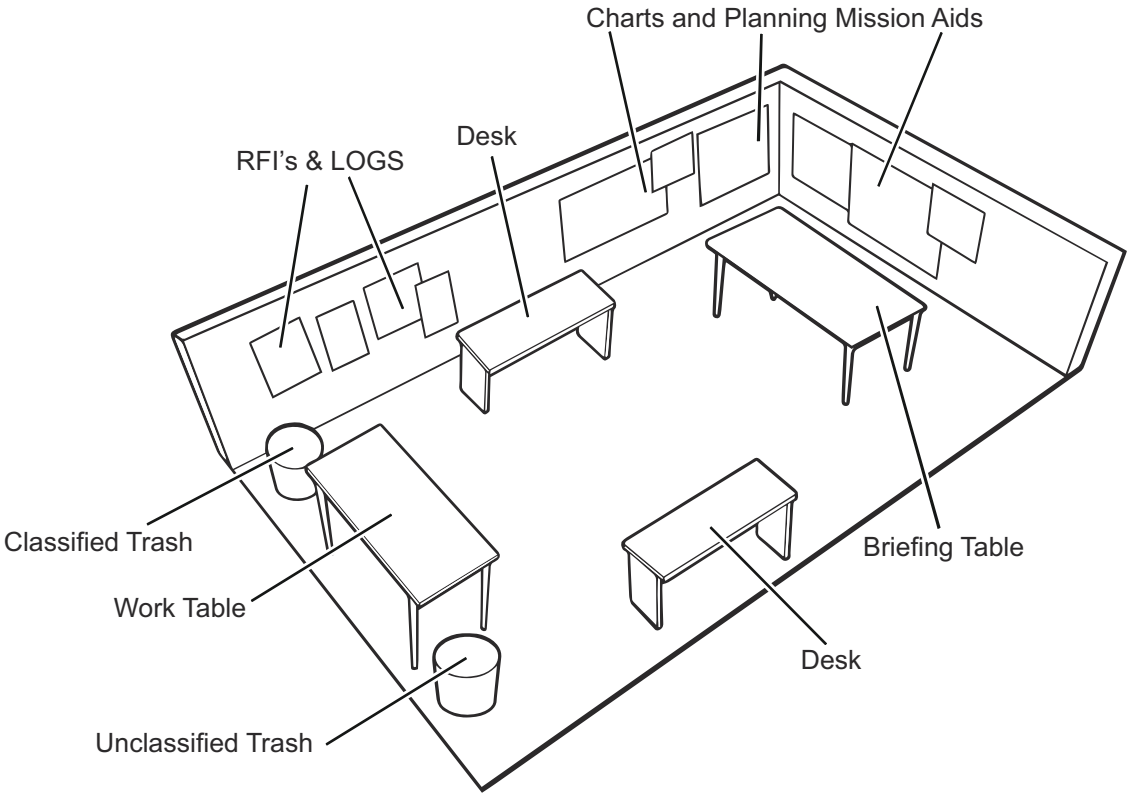

Figure E-2. Team Planning Bay.

Combined Planning and Sleeping Areas

Due to any number of constraints, ground reconnaissance teams must be able to adapt to limited space and be ready to live in the planning area.

FIELD SITE

If no fixed site is available or if the deployment plan dictates, ground reconnaissance units can conduct detailed planning at a field site. (See fig. E-3 on page E-4.)

Field sites can be established in an aircraft hangar, a ship, or a tent. At the planning site, leaders, teams, and supporting personnel may be subjected to the same restrictions and limitations as the fixed site. At a minimum, each ground reconnaissance platoon needs—

- Separate field tents for planning and sleeping.
- Electrical source.
- Bathroom facilities.
- Passive and active security measures, such as wire obstacles or guards.
- Site maintenance support.
- Communications with HHQ and supported unit(s) operations and intelligence sections.
- Planning aids.
- Rehearsal areas.

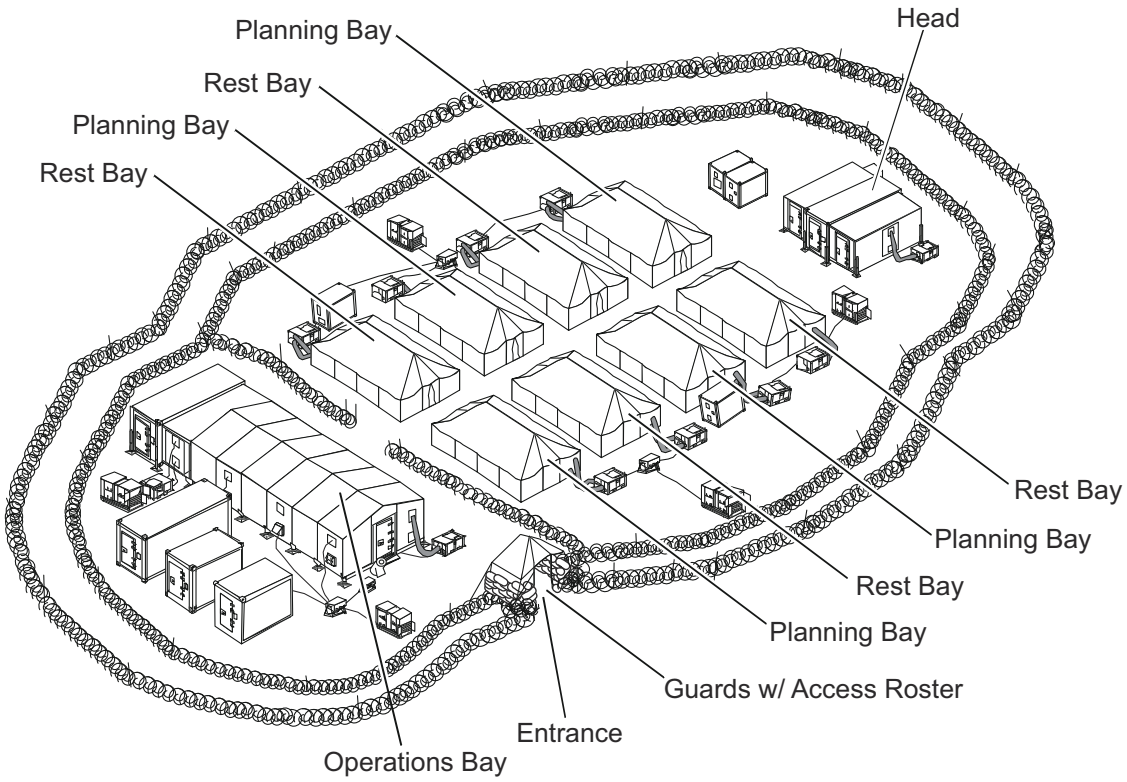

Figure E-3. Field Planning Site.

APPENDIX F
OPERATIONAL VIGNETTES

The operational vignettes outlined in this appendix will serve as a visual aid in understanding the operational concepts outlined in this publication. The vignettes cover a large portion of the range of military operations to include steady state security posture, irregular warfare, and a major combat operation.

GROUND RECONNAISSANCE TASKS

Advance Force Operations

Ground reconnaissance units proceed the main body to an objective area and set the conditions to enable the main body to assault the objective. Ground reconnaissance support to AFO includes—

- Underwater reconnaissance.
- Amphibious reconnaissance.
- Ground reconnaissance operations.
- Seizure of supporting positions through specialized limited scale raids.
- Providing terminal guidance and BDA to offensive air strikes.

Underwater Reconnaissance

Underwater reconnaissance is the collection and reporting of information concerning the hydrographic characteristics of a particular area, well in advance of an amphibious landing force. Ground reconnaissance units conduct subsurface, detailed hydrographic surveys in support of all US Navy landing craft and Marine Corps amphibious assault vehicles.

Amphibious Reconnaissance

Amphibious reconnaissance is the discovering, clarifying, or confirming of information concerning the hydrography, topography, and enemy activities or resources in a coastal area, well in advance of an amphibious landing force. It addresses—

- Initial and/or confirmatory beach reconnaissance.
- ITG of AAVs, tactical boats, amphibious ships, landing craft, or aircraft.
- Riverine operations exploiting the waterways for maneuver. Ground reconnaissance units conduct pre-assault, assault, interdiction, and supporting operations in the riverine environment.

Ground Reconnaissance

Area Reconnaissance. Area reconnaissance obtains detailed information concerning the terrain or enemy activity within a prescribed area.

Zone Reconnaissance. Zone reconnaissance obtains detailed information on all routes, obstacles (including CBRN), terrain, and enemy forces within a zone defined by boundaries.

Route Reconnaissance. Route reconnaissance focuses along a specific line of communication, such as a road, railway, or waterway, to provide new or updated information on conditions and activities along the route.

Force Oriented Reconnaissance. Force-oriented reconnaissance focuses on a specific fighting organization, wherever it may go. Force-oriented reconnaissance concerns gathering intelligence information required about a specific enemy or target unit.

Surveillance

The systematic observation of aerospace, surface, or subsurface areas, places, persons, or things; by visual, aural, electronic, photographic, or other means. Ground reconnaissance units provide the following to surveillance:

- HUMINT that provides insight into intangible factors such as tactics, training, morale, and combat effectiveness that cannot be collected by technical means.
- IMINT that provides ground perspective imagery, in near real-time, in inclement weather, and that can defeat the effects of enemy camouflage, cover, and deception activities.
- MASINT by emplacing technical instruments such as radars, passive electro-optical sensors, radiation detectors, and remote ground sensors in proximity to the surveillance area.

Battlespace Shaping

Battlespace shaping includes the employment of direct fire weapons, demolitions, indirect fires, precision-guided munitions, and naval fires in order to destroy or neutralize enemy forces. Ground reconnaissance units provide the following to shape the battlespace:

- Terminal guidance and BDA to offensive air operations.
- Forward observation and BDA to supporting arms.
- Precision fires by reconnaissance scout snipers.

Hunter-killer operations involve prolonged operations in hostile, safe haven, or semi-permissive environments conducted using unorthodox tactics for the purpose of enemy personnel, leadership, and resource attrition.

Specialized Limited Scale Raids

A small scale attack through the swift penetration of hostile territory to secure information, to confuse the enemy, to destroy installations, or for a specific purpose other than holding terrain.

Ground reconnaissance units provide the following to raids:

- Physically and mentally conditioned for operations demanding the utmost in stamina.
- Highly skilled and trained in SERE, hand-to-hand combat, and use of enemy weapons.
- Proficient in night operations that include obstacle breaching, long-range communications, close quarter battle, extended field medical care, and intelligence collections.
- Special skills that allow the force to quickly break contact and move undetected.

STEADY STATE SECURITY POSTURE

Theater Security Cooperation

Theater security cooperation refers to those activities conducted with allies and friends, in accordance with Secretary of Defense guidance, to—

- Build relationships that promote specified U.S. interests
- Build allied and friendly capabilities for self-defense and coalition operations
- Provide US forces with peacetime and contingency access.

Refer to the following vignette for ground reconnaissance employment during TSC events.

Ground reconnaissance units are introduced to the AO during the exercise planning and coordination phase (see fig. F-1 on page F-4). These units are capable of conducting overt amphibious, underwater, and ground reconnaissance to enable the transition of the MAGTF ashore, the maneuver of MAGTF element once ashore, and assist successful engagement with HN forces.

Overt collection tasks may include: points of entry surveys, route reconnaissance, effects of terrain and weather on forces, and surveillance of suspected/known aggressor locations. The purpose of ground reconnaissance activities is to validate operational planning assumptions and enable the execution of the exercise.

Collections conducted by the ground reconnaissance units facilitated planning for the MAGTF to transition ashore (see fig. F-2 on page F-5). Ground reconnaissance tasks during the TSC exercises may include training in general skills, amphibious skills, SPIE skills, and marksmanship skills.

Crisis Response and Limited Contingency Operations

A limited contingency operation in response to a crisis includes all of those operations for which a JFC must develop an OPLAN or OPORD. The level of complexity, duration, and resources depends on the circumstances. Included are operations to ensure the safety of American citizens and US interests while maintaining and improving United States' ability to operate with multinational partners to deter the hostile ambitions of potential aggressors. Some typical crisis response and limited contingency operations are NEO, peace operations, foreign humanitarian assistance, recovery operations, strikes and raids, defense support of civil authorities, and homeland defense.

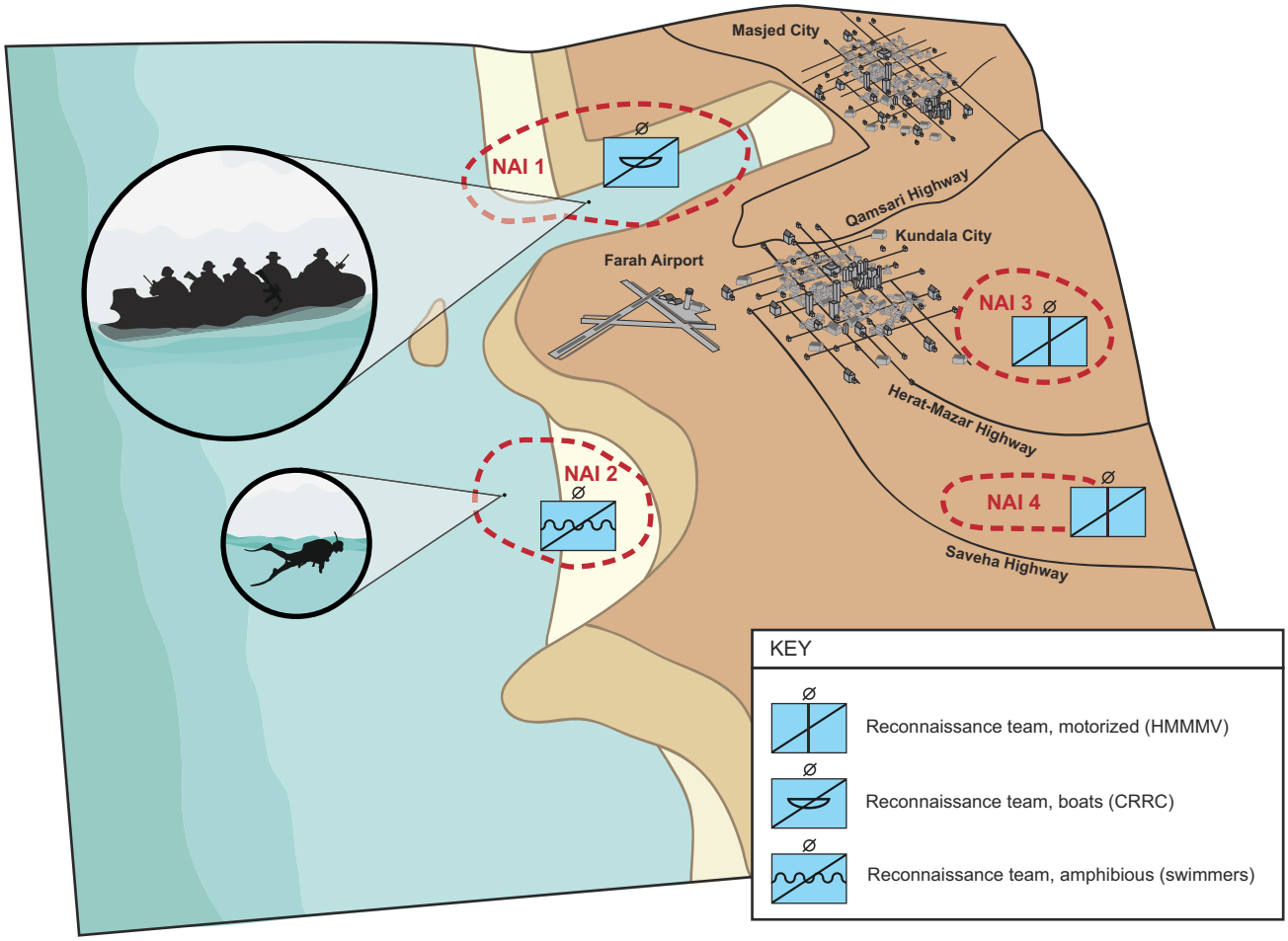

Figure F-1. Theater Security Cooperation Exercise 1.

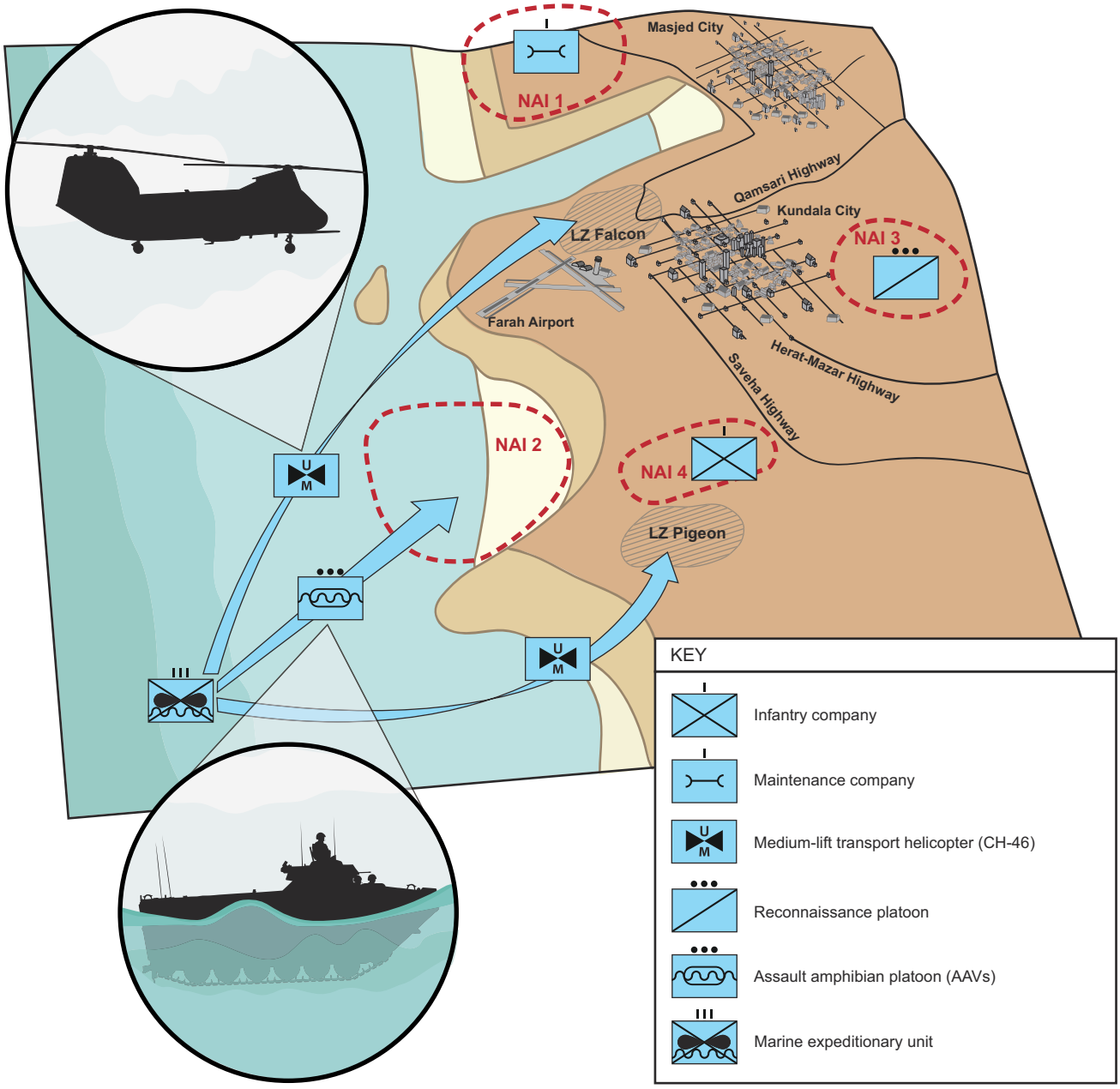

Figure F-2. Theater Security Cooperation Exercise.

Refer to the following vignette for ground reconnaissance employment during crisis response and limited contingency operations.

Ground reconnaissance units are introduced prior to the arrival of the main body (see fig. F-3). These units are capable of conducting amphibious, underwater, and ground reconnaissance to enable the transition of the MAGTF ashore, the maneuver of MAGTF element once ashore, and assist with setting the conditions to accomplish the contingency operation. Collection tasks may include: points of entry surveys; route, bridge, delta, and railroad reconnaissance; effects of terrain and weather on forces; and surveillance of suspected/known aggressor locations.

Collections conducted by ground reconnaissance units facilitated planning for the transitioning ashore of the MAGTF (see fig. F-4 on page F-7). Ground reconnaissance units are capable of conducting operations to enable the maneuver of the MAGTF once ashore. Tasks may include: battlespace shaping, specialized limited scale raids, ITG of assault craft, and surveillance of suspected/known aggressor locations.

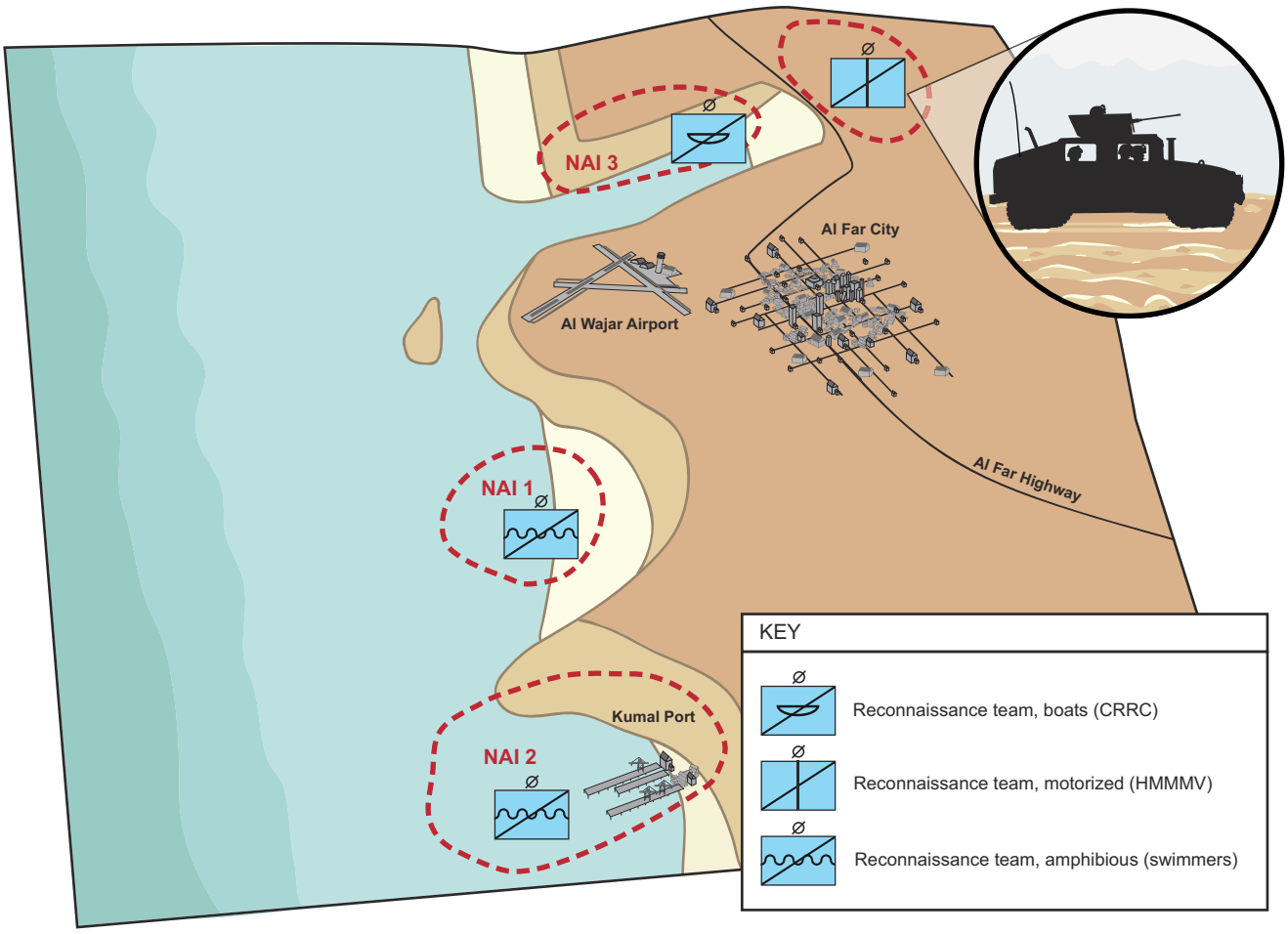

Figure F-3. Crisis Response and Limited Contingency Operations 1.

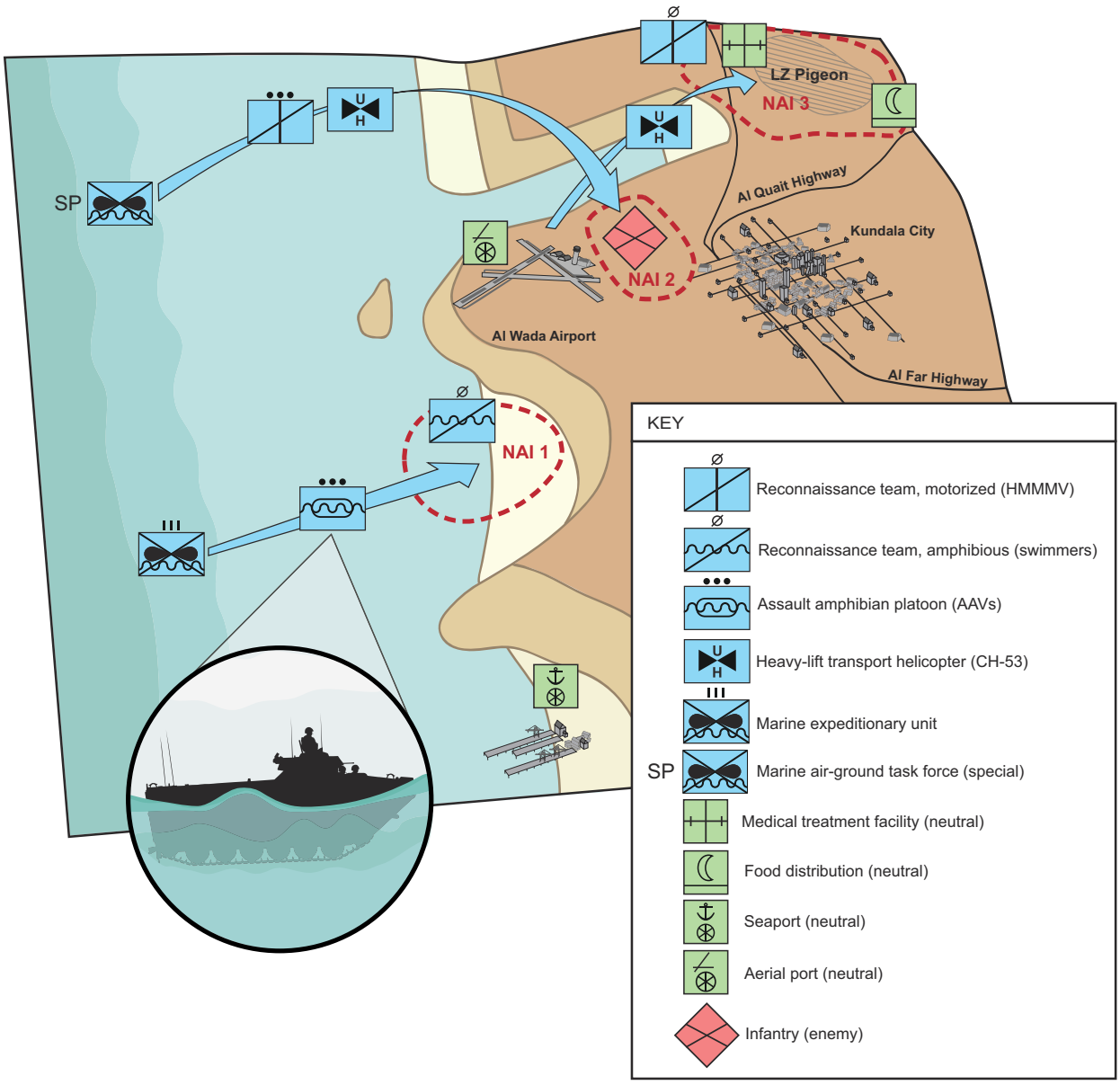

Figure F-4. Crisis Response and Limited Contingency Operations 2.

IRREGULAR WARFARE

Insurgent groups adopt an irregular approach because they initially lack the resources required to directly confront the incumbent government in traditional warfare. The nature of insurgency requires the commander's operational approach to be flexible enough to adapt specific tactical activities to local conditions.

An understanding of the operational environment enables the development of a COIN approach that includes realistic, achievable objectives, and properly aligns ends, ways, and means.

Understanding of the operational environment is accomplished through tailoring intelligence preparation of the operational environment and assessment requirements for a COIN environment. The various components of the operational environment provide a lens through which a COIN force may gain an understanding of the decisionmaking and associated behavior of the relevant actors. The COIN operational environment encompasses the relevant actors and the physical areas and factors within the physical domains and the information environment. Refer to the following vignette for ground reconnaissance employment during COIN operations.

Ground reconnaissance units are introduced during Phases O and I to conduct military to military (commonly referred to as Mil-to-Mil) engagement and TSC exercises (see fig. F-5). These units are capable of conducting amphibious, underwater, and ground reconnaissance to enable the transition of the MAGTF ashore, the maneuver of MAGTF element once ashore, and assist successful engagement with HN forces.

Overt collections tasks may include: points of entry surveys, route reconnaissance, effects of terrain and weather on forces, and surveillance of suspected/known aggressor locations. The purpose of ground reconnaissance activities is to validate operational planning assumptions and enable shaping and deterrence activities.

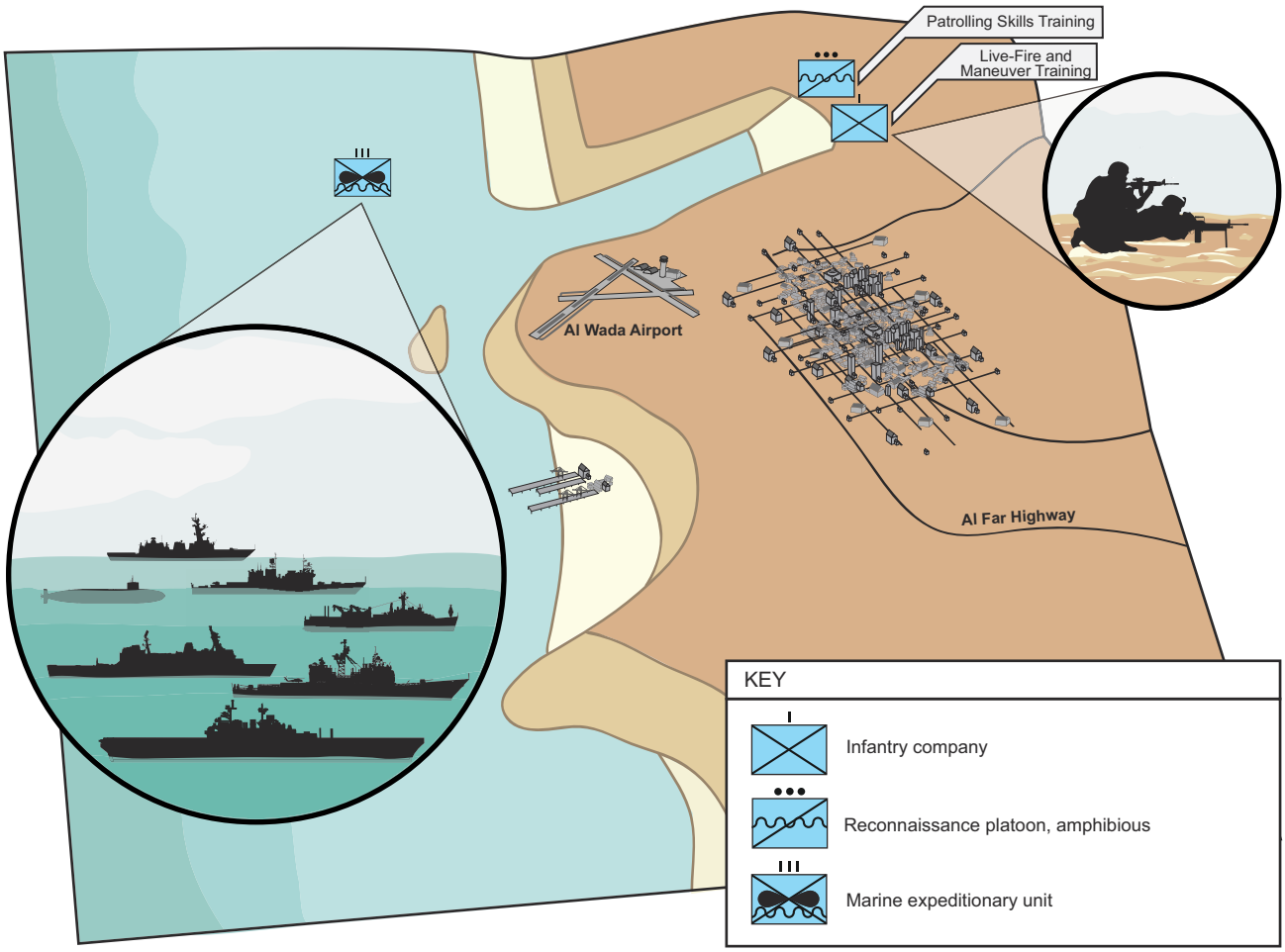

Figure F-5. Irregular Warfare Operation (Phase 0 and I) Shape and Deter.

Ground reconnaissance units are employed during Phase II to conduct access-oriented reconnaissance in the OE (see fig. F-6). These units are capable of conducting amphibious, underwater, and ground reconnaissance as well as battlespace shaping and specialized limited scale raids to set the conditions for the transitioning of the MAGTF ashore.

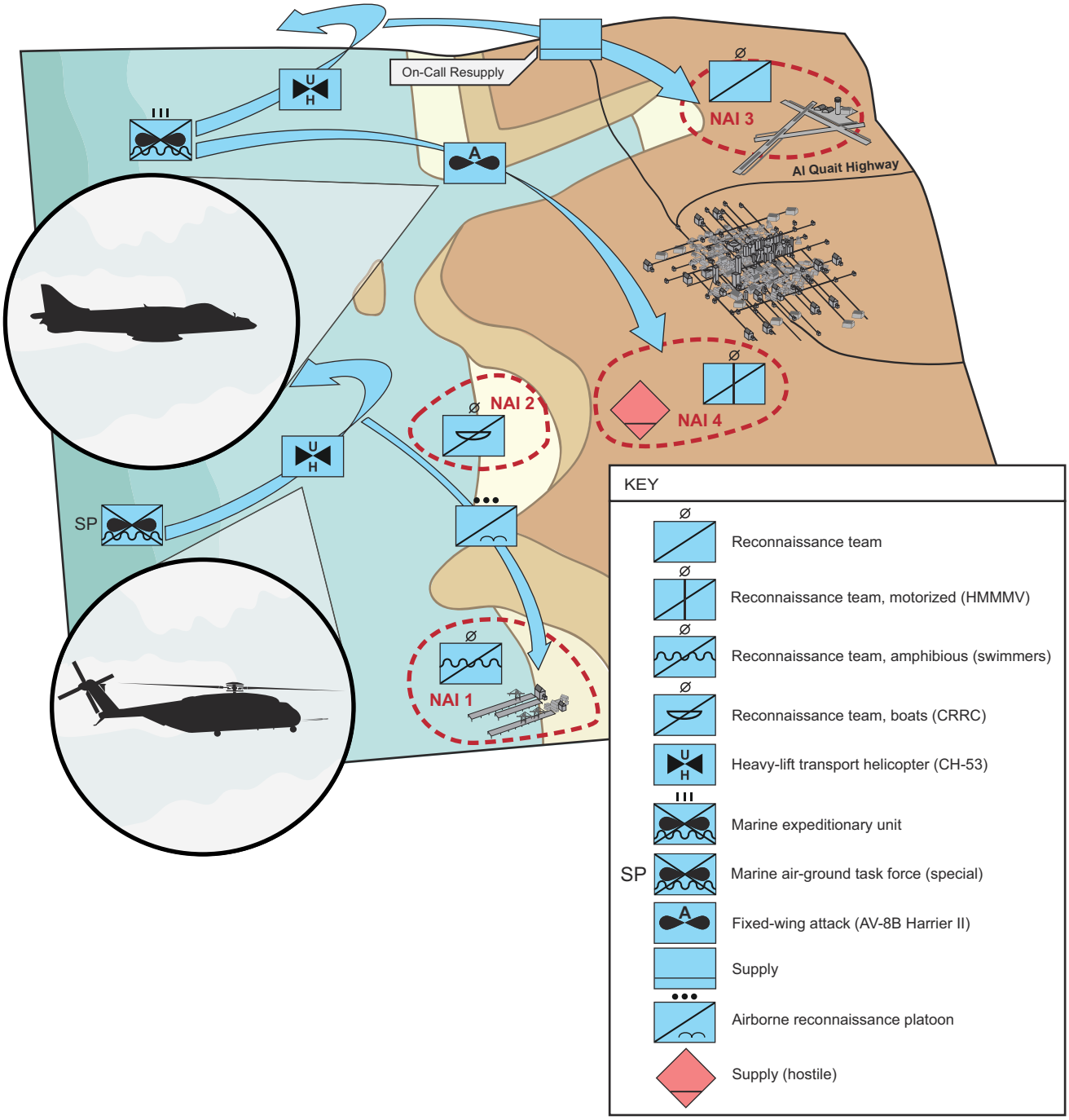

Figure F-6. Irregular Warfare Operations (Phase II) Seize the Initiative.

Clandestine tasks may include: points of entry surveys, route reconnaissance, terminal munitions guidance and BDA, and surveillance of suspected/known aggressor locations. The purpose of ground reconnaissance activities is to validate operational planning assumptions, expand friendly freedom of action, and degrade enemy capabilities.

Collections and shaping operations conducted by ground reconnaissance units facilitated planning for and enabled the MAGTF to transition ashore. During Phase III, ground reconnaissance units conduct maneuver and target-oriented reconnaissance to allow the MAGTF to close with and dominate its objectives (see fig. F-7).

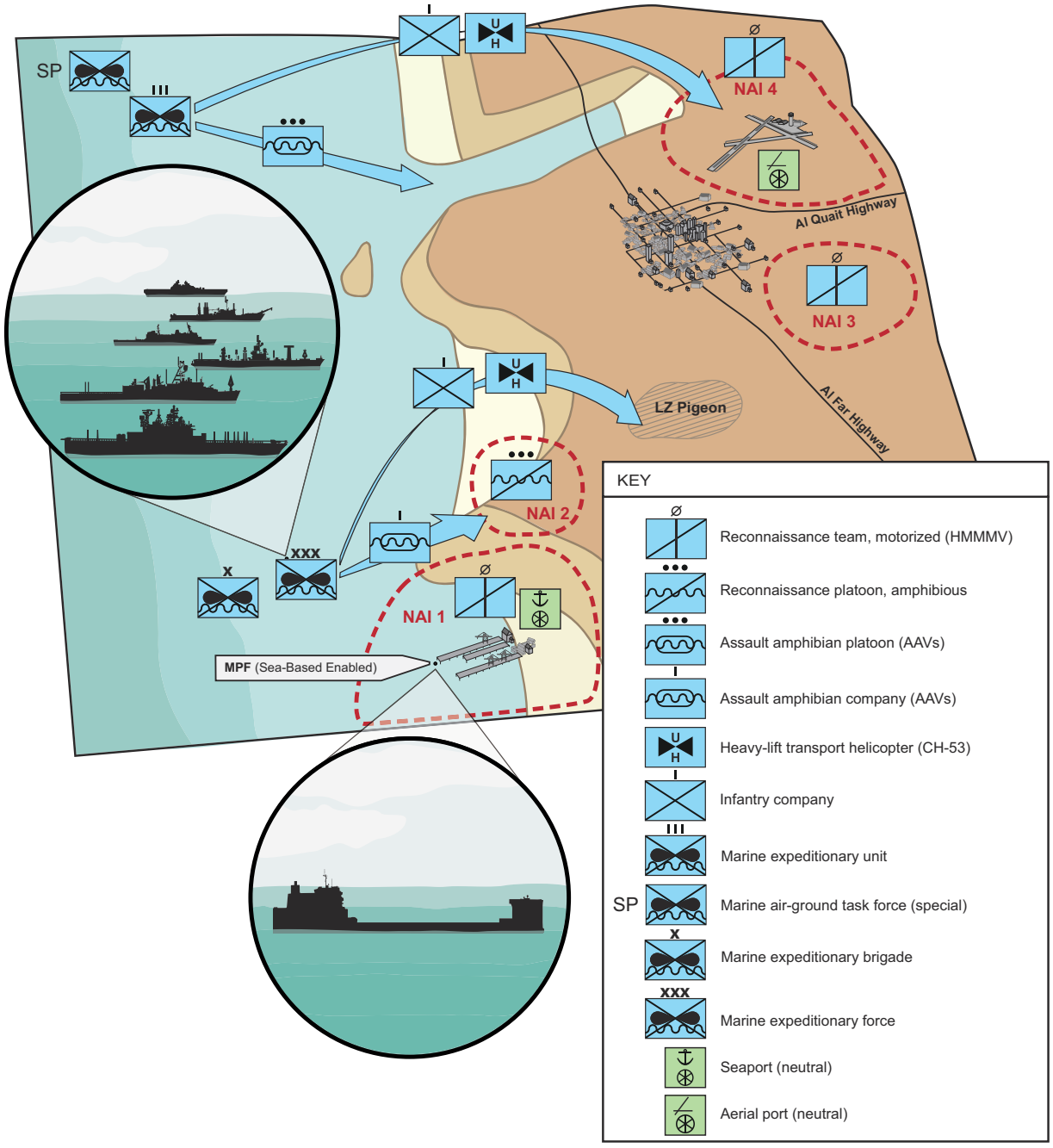

Figure F-7. Irregular Warfare Operation (Phase III) Dominate.

Clandestine tasks may include: battlespace shaping, specialized limited scale raids, ITG of assault craft, terminal munitions guidance and BDA, and surveillance of suspected/known aggressor locations. The purpose of ground reconnaissance activities is to support the maneuver of MAGTF elements and enable them to control the AO.

Maneuver and target-oriented reconnaissance operations conducted by ground reconnaissance units enabled the MAGTF to transition ashore and dominate their objectives. During Phase IV, ground reconnaissance units conduct operations in gaps and seams between MAGTF elements (see fig. F-8).

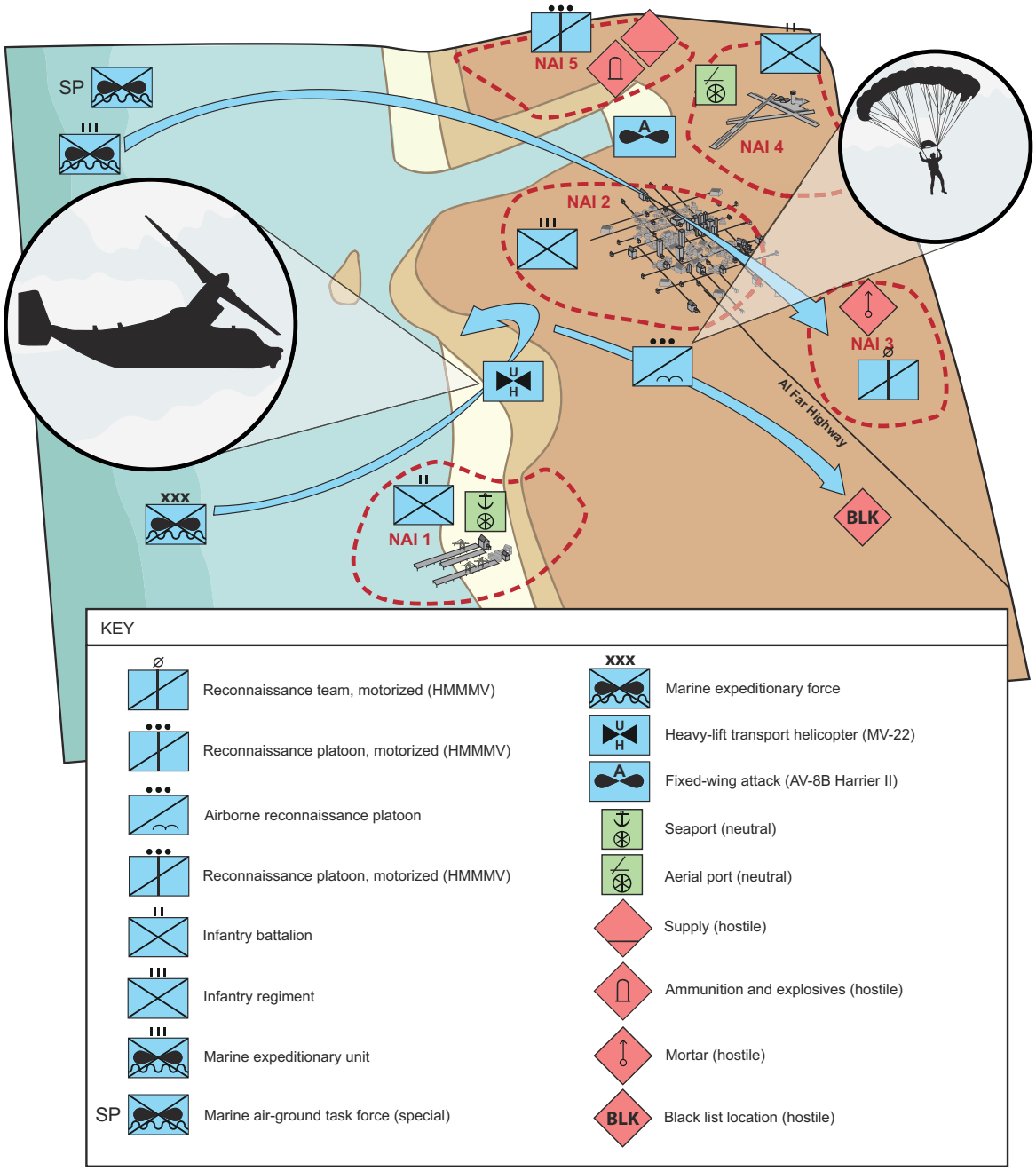

Figure F-8. Irregular Warfare Operation (Phase IV) Stabilize.

Clandestine tasks may include: battlespace shaping, specialized limited scale raids, hunter-killer operations, terminal munitions guidance and BDA, and surveillance of suspected/known aggressor locations. The purpose of ground reconnaissance activities is to degrade enemy capabilities and deny enemy freedom of action; enabling MAGTF elements to establish a safe and secure environment.

Ground reconnaissance operations conducted in the MAGTF's gaps and seams assisted the MAGTF in restoring local political, economic, and infrastructure stability. During Phase V, ground reconnaissance units conduct operations external of populace areas enabling civil authorities to govern and administer services to the populace (see fig. F-9).

The purpose of ground reconnaissance activities is to degrade enemy capabilities and deny enemy freedom of action; enabling the withdrawal of the MAGTF and transition to civil governance.

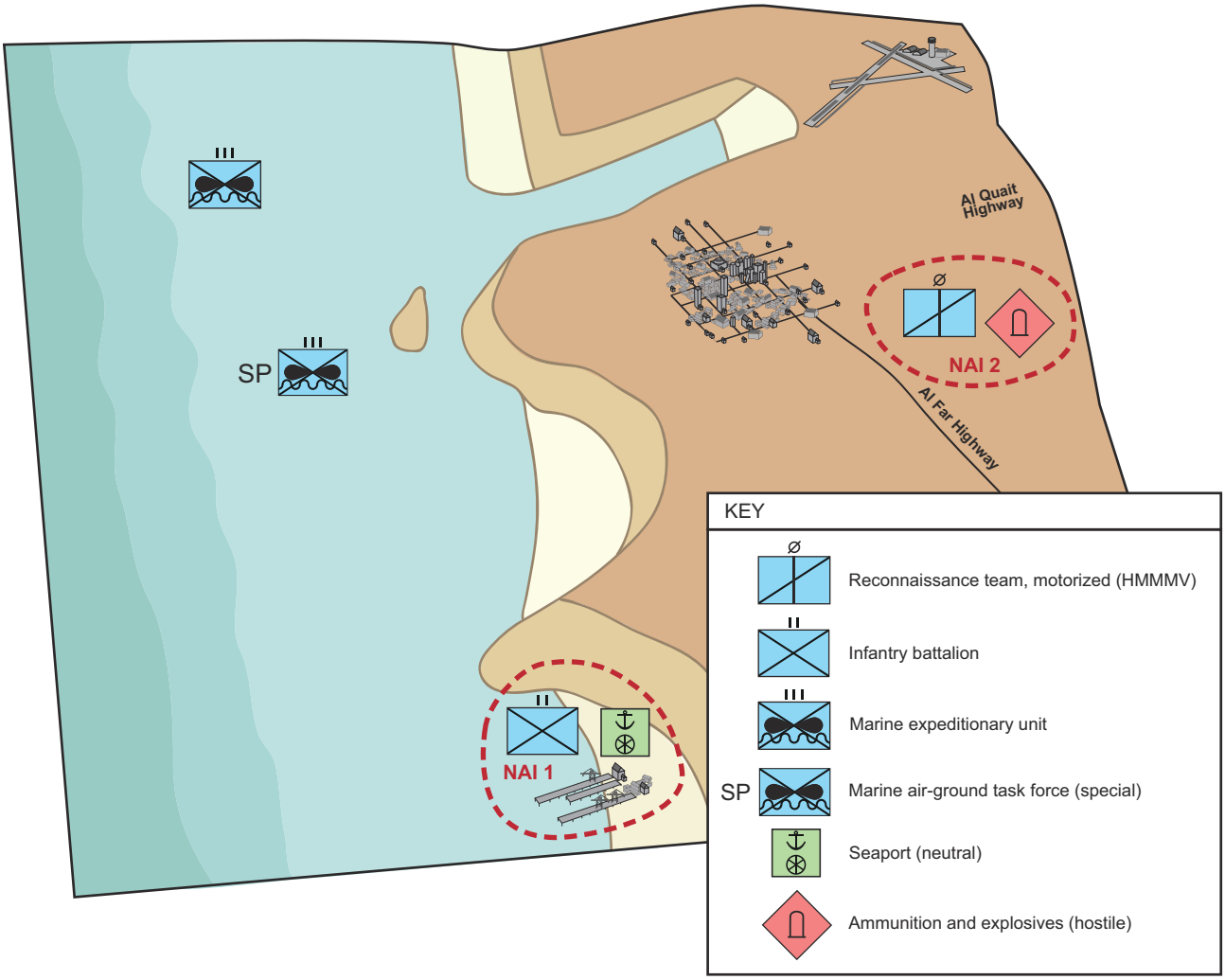

Figure F-9. Irregular Warfare Operation (Phase V) Enable Civil Authority.

MAJOR COMBAT OPERATION

Joint forcible entry operations seize and hold lodgments against armed opposition. A lodgment is a designated area in a hostile or potentially hostile operational area that, when seized and held, makes the continuous landing of troops and materiel possible and provides maneuver space for subsequent operations. These operations are conducted using various capabilities including: amphibious assault, amphibious raid, airborne assault, air assault, and any combination thereof.

In analyzing a forcible entry operation, the JFC and staff consider lodgment terrain and infrastructure, with a critical eye on the ability to support follow-on operations. Forcible entry operations are normally conducted during the "seize the initiative" or "dominate" phase of a joint operation. Within the context of these phases established by a higher-level JFC, the forcible entry operation commander may establish additional phases that fit the forcible entry concept of operations. In the development of a forcible entry COA, five phases are addressed: preparation and deployment, assault, stabilization of the lodgment, introduction of follow-on forces, and termination or transition.

Ground reconnaissance operations may be introduced to the AO in advance of a possible assault to develop or prepare an area for forcible entry. During Phase I, gaining access depends upon numerous factors such as the nature of the campaign, geography, enemy's capability to deny access, proximity of friendly bases, and the available joint capabilities (see fig. F-10 on page F-14).

Clandestine methods of maneuver may include: waterborne infiltration, airborne infiltration, and ground infiltration. The purpose of ground reconnaissance activities is to gain and maintain operational access to the AO.

Ground reconnaissance units may be employed prior to the assault to satisfy the JFC's PIRs and determine if conditions for the assault have been established. During Phase I, ground reconnaissance units gain access to the AO and conduct access-oriented reconnaissance to prepare the area for forcible entry, provide detailed intelligence not available by other means, and significantly reduce the enemy defensive capabilities (see fig. F-11 on page F-15).

Clandestine tasks may include: points of entry surveys and route reconnaissance; effects of terrain and weather on forces; terminal munitions guidance and BDA; surveillance of suspected/known enemy locations. The purpose of ground reconnaissance activities is to validate operational planning assumptions and support the introduction of JTF and MAGTF.

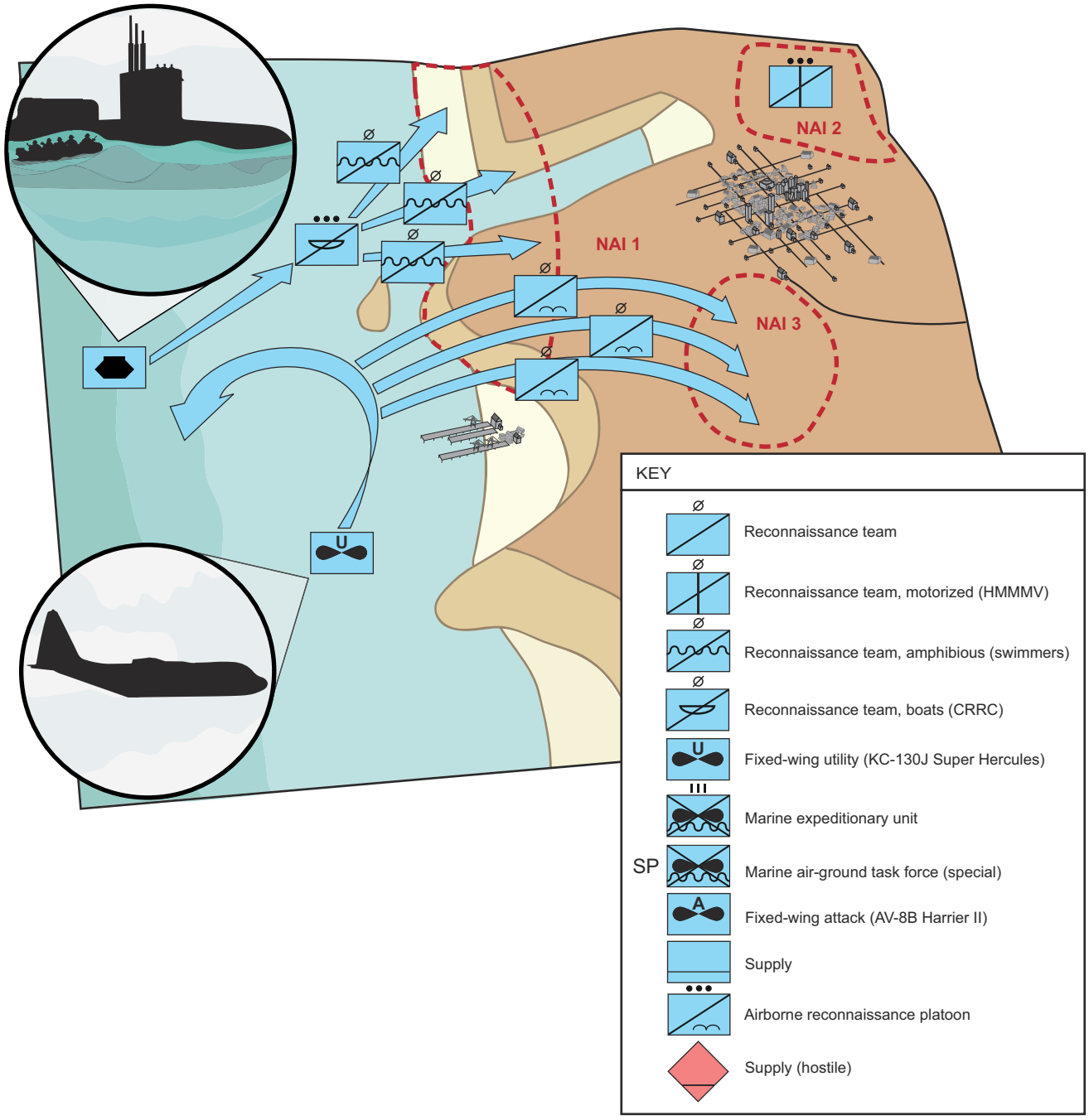

Figure F-10. Example of a Forcible Entry Operation (Phase IA) Preparation and Deployment.

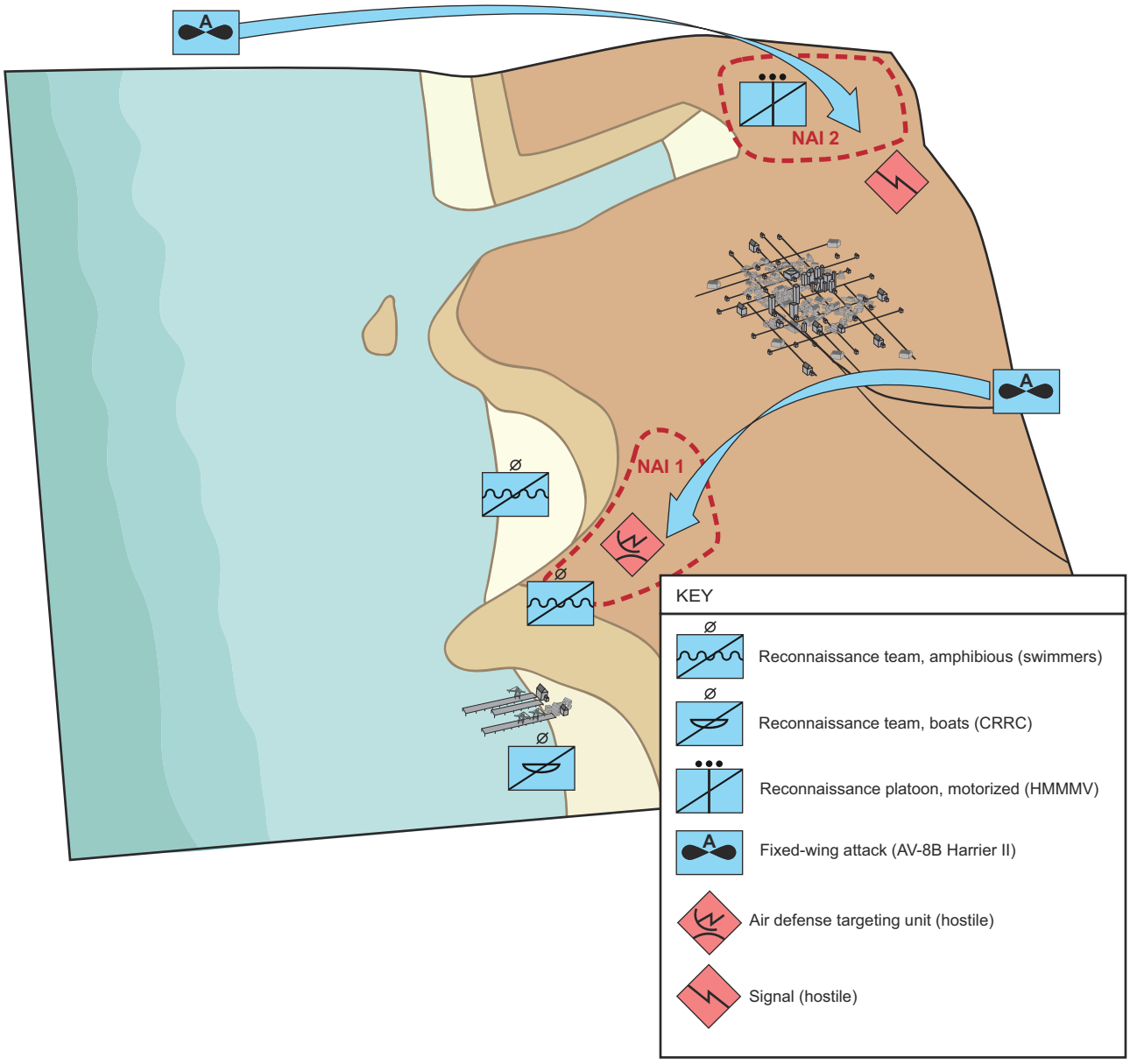

Figure F-11. Example of a Forcible Entry Operation (Phase IB) Preparation and Deployment.

Collections and shaping operations conducted by ground reconnaissance units facilitated JTF planning and enabled the MAGTF to transition ashore. During Phase II, ground reconnaissance units conduct maneuver and target-oriented reconnaissance to enable MAGTF maneuver, surveillance beyond the initial assault objectives, and interdiction operations (see fig. F-12 on page F-16).

Clandestine tasks may include: battlespace shaping, ITG of assault craft, terminal munitions guidance and BDA, and surveillance of suspected/known enemy locations. The purpose of ground reconnaissance activities is to deny enemy freedom of action and support maneuver of MAGTF elements enabling them to establish a lodgment.

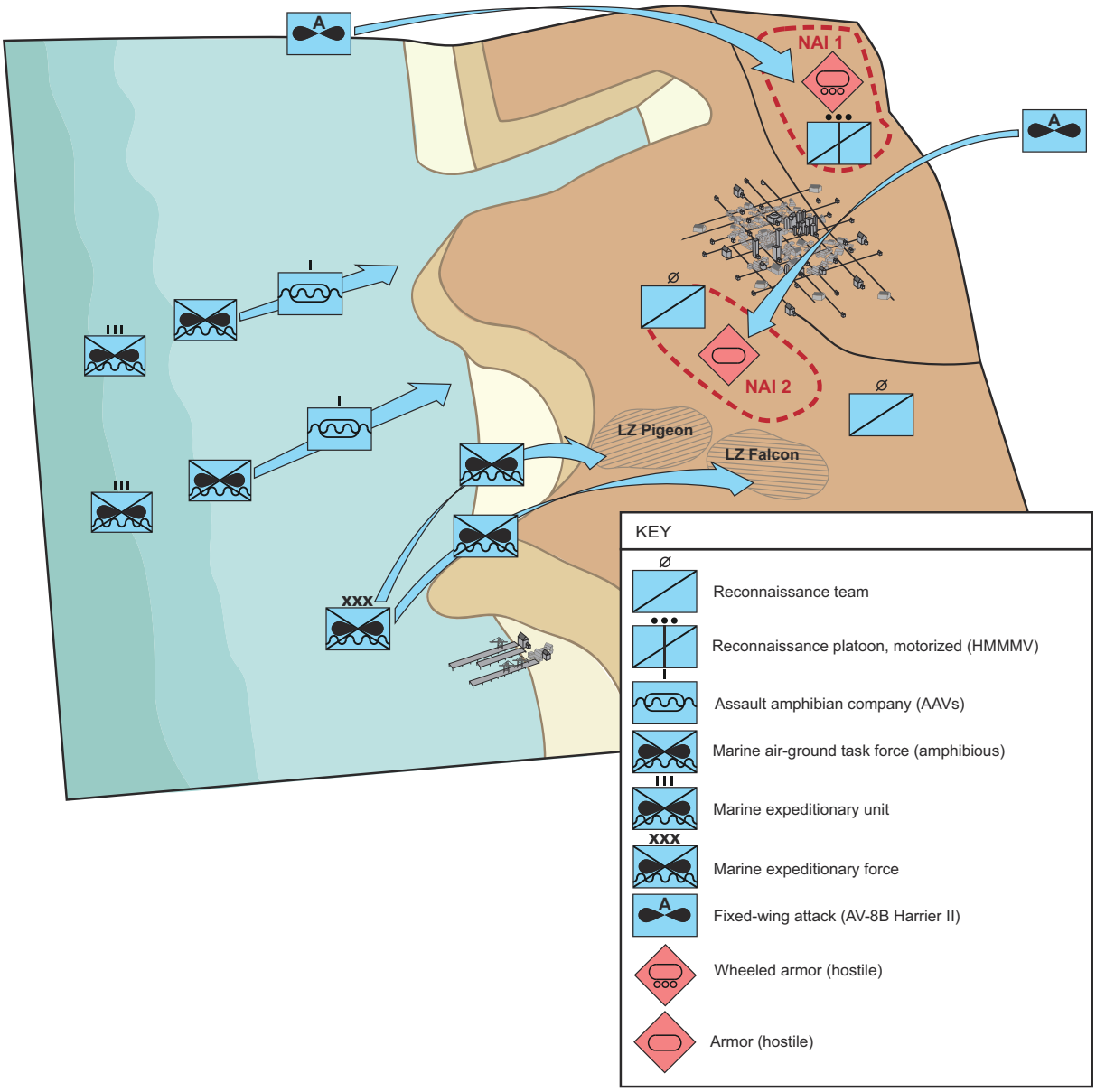

Figure F-12. Example of a Forcible Entry Operation (Phase II) Assault.

Reconnaissance and interdiction operation conducted by ground reconnaissance units assisted the JTF and MAGTF to transition ashore and establish the lodgment. During Phases III through V, ground reconnaissance units conduct access, maneuver and target-oriented reconnaissance to shape MAGTF follow-on objectives, facilitate friendly force maneuver, and deny enemy freedom of action (see fig. F-13 on page F-17).

Clandestine tasks may include: battlespace shaping, specialized limited scale raids, hunter-killer operations, terminal munitions guidance and BDA, and surveillance of suspected/known enemy locations. The purpose of ground reconnaissance activities is to degrade enemy capabilities and deny enemy freedom of action; enabling MAGTF elements to stabilize the lodgment and transition to further operations.

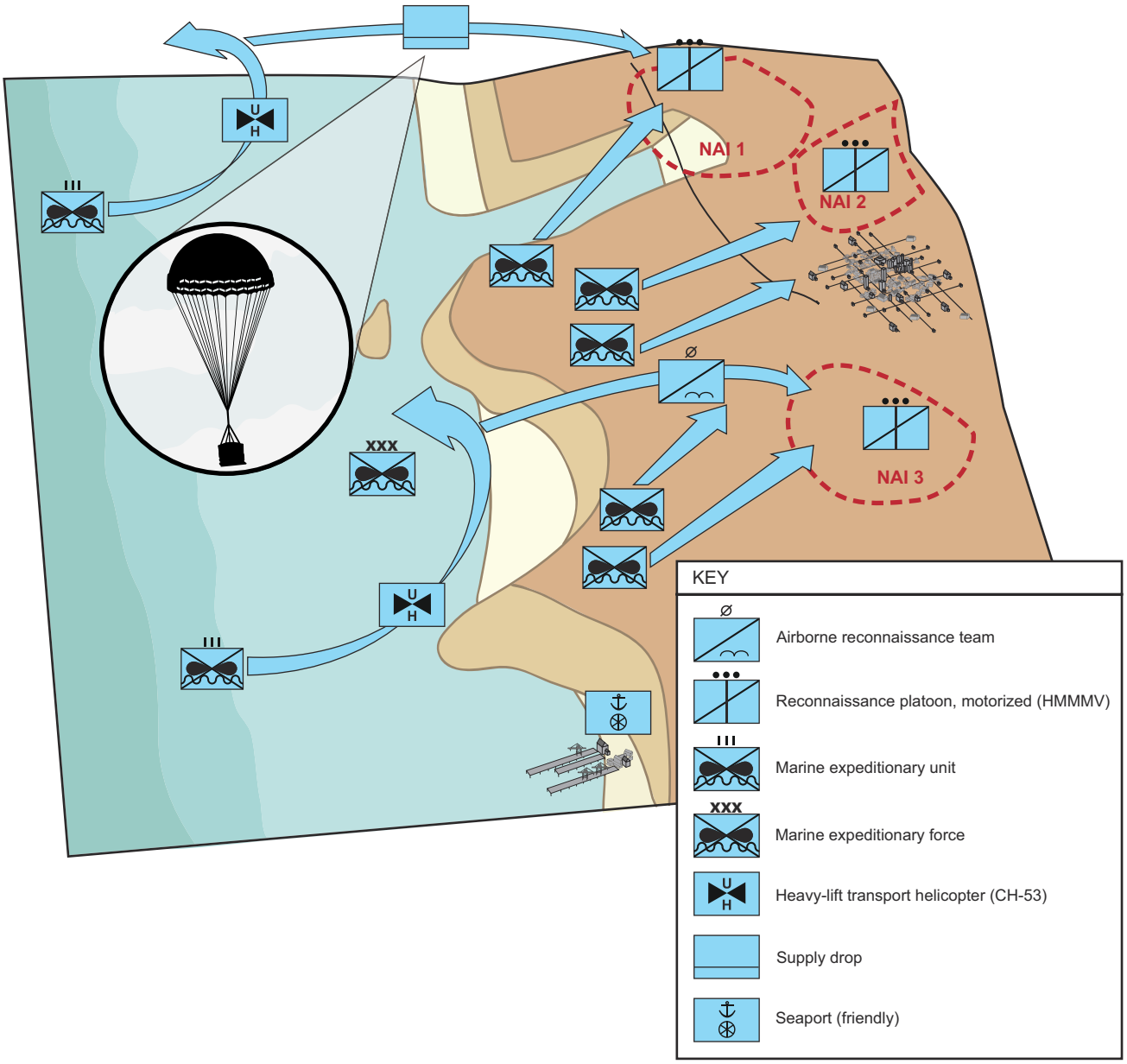

Figure F-13. Example of a Forcible Entry Operation (Phase III, IV, and V) Stabilization of the Lodgment, Introduction of Follow-on Forces, and Transition.

APPENDIX G
DAMAGE ASSESSMENTS FOR SPECIFIC TARGETS

Note: This appendix is meant to be used as a guide to provide a detailed discussion on the types of damage assessments for specific targets. However, it is not all-encompassing and the skills needed to accurately determine damage assessments can only be gained through realistic training and real-world experience.

DAMAGE TYPES AND LEVELS

As stated in chapter 6, the ground reconnaissance patrol reports the extent of physical and functional damage sustained by each target. Physical damage assessments estimate the extent of physical damage resulting from the application of military force, that is, from munitions blast, fragmentation, and the effects of fire. The patrol bases their assessment upon observation and interpretation of three damage types: collateral, physical, and functional.

Collateral Damage

The patrol reports any collateral damage that occurs during its BDA mission. Collateral damage is defined as unintentional or incidental damage to facilities or equipment, or casualties, that occur due to military actions directed against a targeted enemy force or facility.

Physical Damage

Assessing physical damage is a judgment call. The key factors are the type and size of the target and the warhead used, and the location of the detonation. The patrol also considers whether the enemy's use of camouflage, concealment, and deception reduced or increased the physical damage, because these factors could distort the assessment.

Functional Damage

The patrol assesses the extent to which military force degraded or destroyed the ability of the targeted facility or objective to perform its intended mission. The level of success is based upon the operational objectives established against the target. Since the assessment of functional damage is subjective, the patrol need not associate a confidence level with it. However, they can

include an estimate of the time required for the recuperation or replacement of the target function. The levels of functional damage are as follows:

- *No Functional Damage*. Target is undamaged or has sustained little or no damage to critical element(s), leaving normal functional capacity intact. The target is fully operational or able to act; it is mission capable. This damage level does not require recuperation or replacement times.
- *Light Functional Damage*. The critical element(s) of the target has sustained damage, causing less than 15 percent decrease in normal operational capability. This damage level requires an estimation of the time required for recuperation or replacement of the target function.
- *Moderate Functional Damage*. The critical element(s) of the target has sustained damage, causing a 15–45 percent decrease in normal operational capability. This damage level requires an estimation of the time required for recuperation or replacement of the target function.
- *Severe Functional Damage*. The critical element(s) of the target has sustained damage, causing greater than a 45 percent decrease in normal operational capability. This damage level requires an estimation of the time required for recuperation or replacement of the target function.
- *Functional Destruction*. The critical element(s) of the target has sustained damage rendering the entire target unusable for its original purpose. Target cannot support combat or production operations without repairing or replacing critical elements. This damage level requires an estimation of the time required for recuperation or replacement of the target function.
- *Abandoned*. Regardless of physical damage, this facility or equipment is not being used for its intended purpose. Target cannot support combat or production operations without being reoccupied, re-equipped, or both.
- *Unknown Functional Damage*. Although the critical element(s) of the target has been attacked, insufficient data exist to assess whether functional damage occurred.

DAMAGE ASSESSMENTS FOR SPECIFIC TARGETS

Bridges

A bridge is designed to allow movement of personnel and equipment across an obstacle. Destruction of the bridge might not be required. For example, degrading the ability of the bridge to allow movement of vehicles might be enough to accomplish the mission.

Physical Damage. When reporting physical damage, report the number of spans that are damaged and destroyed out of the total number of spans on the bridge. Note that the deck or floor of a railroad bridge can be solid or open track. Damage is reported as—

- *No Damage*. Military action has not caused any damage.
- *Light Damage*. The bridge has sustained superficial damage, but the roadway remains undamaged.
- *Moderate Damage*. All spans remain intact, but one or more spans have sustained holes in the deck or floor. For pontoon bridges, one pontoon section has been sunk.

- *Severe Damage*. All spans remain attached, but one or more spans have sustained 50 percent destruction to the deck or floor width. For pontoon bridges, two or more nonadjacent pontoon sections have been sunk.
- *Destruction*. At least one span has been dropped. Piers or abutments might have sustained damage or they might have been destroyed. For pontoon bridges, two or more adjacent pontoon sections have been sunk.

Functional Damage. Using the assessment of physical damage can help determine the level of functional damage for various bridge formations:

- *Highway Bridge*. When a bridge has sustained moderate to severe damage, identify the number of lanes that remain open (on a highway bridge), what type of traffic, and how much can still use the bridge.
- *Railroad Bridge*. Moderate or greater physical damage to a railroad bridge generally renders it unusable.
- *Pontoon Bridge*. Recuperation time may be short in duration for a pontoon bridge that has been destroyed due to the destruction of a few sections. Several factors such as the presence or availability of spare sections, repair capability, or both, can rapidly reverse the effects of an attack. Some might be repaired before the combat assessment report is completed.
- *Permanent Spanned Bridge*. When a permanent bridge span sustains moderate to severe physical damage, assessing the extent of functional damage is difficult. The combat assessment analyst can seldom see under the bridge, but the damage there often exceeds the damage that he can see on the deck. This is due to the delayed fuses used on most bridges.

Buildings

A building is designed to environmentally shelter an enclosed function or equipment. Destruction of the building is not required. The point is to destroy the critical element(s) it houses. Types of buildings include framed buildings, buildings with load-bearing walls, high multistory buildings, and buildings with multiple wings:

- *Framed Buildings*. Framed structures rarely collapse totally in an attack with conventional weapons. However, regardless of external and overall damage, the building's frame tends to remain intact. On the other hand, a steel or concrete frame need not collapse for the building to sustain damage at the levels previously described. Examples of framed buildings include aircraft hangars, office buildings, and military headquarters.
- *Buildings with Load-Bearing Walls*. In contrast to framed buildings, those with load-bearing walls, that is, walls that carry the weight of the floor and roof, generally sustain damage levels equal to the amount of building collapse, and the damaged elements generally include the load-bearing and non-load-bearing structural elements.
- *High, Multistory Buildings*. For buildings with more than four stories or multiple sections or wings, the patrol should report the level of damage for each story, section, or wing individually and that of the structure as a whole. For example: if a ten-story building receives severe dam-

age to the upper three stories, report the level of damage to those three floors plus the level of damage to the structure as a whole, which in this case might be assessed as moderate.

- *Buildings with Multiple Wings*. For buildings with multiple wings, the patrol reports the destroyed wings and the damage to the remainder of the structure. For example, they might report the north and south wings of a headquarters building have been destroyed, while the center section sustained only moderate damage.

Physical Damage. Target-element-area damage includes damage to non-load-bearing elements such as facades and external sheathing, as well as broken windows and glass, blown-out curtain walls, and blown-out roof panels. Damage is reported as—

- *No Damage*. Military action has not caused any apparent damage.
- *Light Damage*. The target-element has sustained up to 15 percent damage.
- *Moderate Damage*. The target-element area has sustained 15–45 percent damage.
- *Severe Damage*. The target-element area has sustained 45–75 percent damage.
- *Destruction*. The target-element area has sustained 75–100 percent damage.

Functional Damage. The greater the extent of physical damage to the building, the greater the likelihood that the critical elements within are damaged, hence the building requires a longer recuperation time to restore the function. The following must be taken into consideration when assessing functional damage:

- *Location and Hardness*. Although the level of physical damage to a building and functional damage to its critical element(s) correlate somewhat, the location and hardness of a building's contents are the key to a meaningful functional assessment. For example, in an industrial building, the machinery may be less vulnerable than the structure in which it is contained. The structure might be moderately damaged, while the machinery it houses sustains little or no damage. On the other hand, fragile computer or other electronic equipment might be destroyed while the building that houses it sustains far less functional damage.
- *Contents*. Framed structures tend to show less apparent physical damage and are less likely to collapse than other types of buildings. Thus, determining the functional damage to the contents of a framed building is more difficult than assessing those of a wall-bearing structure. Wall-bearing structures tend to show more physical damage and collapse more readily, causing greater functional damage to their contents than do framed structures.
- *Recuperation*. The patrol reports recuperation for both the structure and for the critical elements.
- *Structural Damage as Functionally Destoyed Criteria*. General weaponeering guidance considers a building unusable (functionally destroyed) when it has sustained 50 percent structural damage. Depending on the type and location of critical elements, a lesser percentage of damage may be adequate to achieve the desired level of functional degradation.
- *Landmarks and Symbols*. A building may also serve as an important landmark or other symbol of national unity and resolve; in these cases, the entire building may be the critical element.

Bunkers

Formerly called "hardened facilities," bunkers can be difficult for a ground reconnaissance patrol to provide an accurate BDA on bunkers unless they are able to conduct a physical inspection.

Physical Damage. Target-element-area damage includes damage to non-load-bearing elements such as facades and external sheathing, as well as to broken windows and glass, blown-out curtain walls, and blown-out roof panels. Damage is reported as—

- *No Damage*. Military action has not caused any apparent damage.
- *Light Damage*. No weapon penetration has occurred, but exterior damage is apparent.
- *Moderate Damage*. Weapons have obviously penetrated the bunker.
- *Severe Damage*. Part, but less than one-third of, the bunker roof or side walls has collapsed.
- *Destruction*. More than one-third of the bunker roof and side walls have collapsed.

Functional Damage. Assessing damage to all types of hardened structures requires analysis of aircraft cockpit video and a search for blown-off entrance doors, burn marks outside entrances, or smoke from fire or secondary explosions. The results of this analysis must be compared to information about the internal configuration of the bunker to determine the approximate location of the weapon detonation.

A single weapon is unlikely to collapse or partially destroy a large bunker built with thick concrete, Burster layer, and soil layers. However, a big weapon detonation inside the bunker generally destroys the contents. Knowledge of bunker construction, such as dimensions, wall placement, and thickness of roofs, floors, or walls is required to accurately assess the extent of internal physical and functional damage.

Functional damage to a bunker depends on its mission. If internal compartmentalization allows, a single round that penetrates the bunker has a good chance of damaging or destroying sensitive contents such as aircraft or munitions. If the damage is not too great, the contents can be moved. In these situations, depending on the level of physical damage, the contents can be removed and the bunker can be reconstituted to reuse for protective storage of other equipment or supplies.

A successful weapon penetration and detonation generally damages or destroys both mission and operations in a bunker serving in a production or C2 role. In any of these situations, the extent of functional damage depends on estimates of physical damage to the internal structure, ventilation system, electronic or communications equipment, power supplies, lights, water lines, tools, and equipment. Generally, long recuperation times are associated with this type of internal damage. As with buildings, the patrol reports the recuperation for both the structure and the critical elements.

Dams and Locks

Dams and locks have one function—to contain water on the upstream side. Damage is reported as—

- *No Damage*. If no damage occurs, no loss of functionality occurs.
- *Damage*. A breach, break, or puncture in the face of the lock or dam affects functionality immediately in the form of a leak, whose size depends on the amount of damage.
- *Destruction*. Loss of the lock or dam causes an immediate flood, which is total functional failure.

Distillation Towers

Distillation tower (e.g., oil refineries) targets include the tower and all associate equipment.

Physical Damage. When reporting physical damage to a specific tower, also report damage level of equipment directly associated with the tower. This equipment usually includes one or more furnaces; one or more heat exchangers or condensers; and elevated pipe ways. If possible, also report damage level of the control building associated with the distillation tower. Damage is reported as—

- *No Damage*. Military action has not caused any apparent damage.
- *Light Damage*. Military action has caused no apparent penetration of the tower's shell or disruption to piping connections. Portions of the insulation covering the tower shell appear to be damaged or scorched.
- *Moderate Damage*. Military action has left the tower shell standing, but has penetrated the tower or deformed or severed piping connections.
- *Destruction*. Military action has at least partially collapsed or toppled the tower.

Functional Damage. The effects of damaging a distillation tower on the target's production capabilities depends on the specific functions of the towers, such as primary distillation or secondary processing. The patrol reports functional damage of a distillation tower in terms of the time required to repair or replace it and the specific production capabilities denied in the meantime. The patrol must report damage to equipment directly associated with a distillation tower, because the results could compare to significant damage to the tower.

Ground Force Personnel

Damaging or destroying an occupied position such as a bunker, trench, or other structure or a vehicle such as a personnel carrier or truck usually causes casualties. MCWP 3-16.4, Tactics, Techniques, and Procedures for the Field Artillery Manual Cannon Gunner, states that for indirect fire, 30 percent casualties or material damage inflicted during a short time span normally renders a unit ineffective. However, a commander will stipulate the desired effects and percentages required for success against a specific target category.

Physical Damage. In addition to reporting physical damage levels, the patrol should estimate the total percentage of the ground force destroyed. For equipment, see the damage definitions provided for military equipment. Damage is reported as—

- *No Damage*. Military action has not caused any apparent damage.
- *Damage*. Military action has caused up to 30 percent casualties to visible personnel or to occupied positions or to organic equipment.
- *Destruction*. Military action has caused more than 30 percent casualties to visible personnel or to occupied positions or to organic equipment.

Functional Damage. The attrition of ground forces is influenced by factors in the domains of battle: physical (personnel, weapon systems, and sustainment), cybernetic (C2), morale (will to fight),

training, and leadership. Generally, the greater the personnel casualties and damage to their equipment, communications, and supply networks, the greater the attrition of ground forces and the lower their combat effectiveness. Desertion or POW losses may also render a unit ineffective. As part of determining enemy combat effectiveness (ability to function), two factors must be addressed in clear and simple terms:

- Reconstitution of forces and recuperation of facilities.
- Residual capabilities to perform defense, assault, and supply missions.

Military Equipment

Military equipment includes the following, whether deployed or in depot:

- *Aircraft*. All types of fixed- and rotary-wing aircraft.
- *Armored Vehicles*. Tanks and armored personnel carriers.
- *Artillery*. Field and antiaircraft artillery systems, both towed and self-propelled.
- *Fire-control Components*. All vans or trailers (radar, guidance, power, and computer) associated with surface-to-surface and surface-to-air missile as well as antiaircraft artillery sites.
- *Locomotives*. Any type of rail transportation, to include rolling stock.
- *Missiles*. Surface-to-surface and surface-to-air (fixed and mobile) missiles and their associated launchers.
- *Radar Antennas*. Those that stand alone or are attached to a van or trailer. Radars may or may not be associated with a missile site.
- *Rockets*. Single-round and multi-round rockets and their associated launchers.
- *Trucks*. All types of nonarmored vehicles, whether used for land transportation and/or C2.

Physical Damage. The patrol must carefully consider their observations before reporting "no damage" to military equipment. They might not observe some of the physical deformations that happened. To determine a damage level, the patrol must analyze as many sources and types of information as they can observe; for example, a complete lack of either vehicular movement or radio transmissions for an extended period of time. Then, when they are ready to report physical damage to military equipment, the patrol must report the total number of each type of equipment observed, the number of pieces of equipment damaged, and the number destroyed. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Damage*. Military action has caused physical deformations to equipment such as holes, exterior scorch marks, or broken/missing exterior equipment or components (e.g., broken tracks, wheels, or missing armored plates); however, major components remain intact.
- *Destruction*. Military action has left the equipment not repairable and may need to be scrapped. This qualifies as catastrophic damage.

Functional Damage. The level of functional damage of a missile or radar site depends upon the extent of damage, the number of critical elements and their individual levels of damage, and the interconnectivity of the various elements that make up the site. Visible damage might have little or

no effect on equipment functionality. Functional damage of equipment includes any damage that partly or completely reduces the ability of—

- C2 nodes to effectively operate.
- Logistic nodes to fuel, arm, fix, transport, operate, or protect.
- Engineering resources to provide mobility, countermobility, and survivability support.

Equipment whose reduction in capability affect the functioning of a site or element include—

- *Armored Vehicles and Artillery*. Functional damage is an elimination of firepower capability, prevention of mobility, or both, which the crew cannot repair on the battlefield.
- *Trucks*. Functional damage is a reduction in mobility or inability to use the truck's internal equipment for a number of hours until the crew can repair the equipment or vehicle.
- *Locomotives and Rolling Stock*. Functional damage is prevention of mobility for a number of hours until the crew can repair the locomotive or rolling stock cars. Functional damage can also include damage or destruction of materials within the cars.
- *Aircraft*. Functional damage prevents takeoff for a number of hours until the crew can repair it.
- *Rocket, Missile, or Launcher*. Functional damage prevents successful or effective firing of the weapon. The crew cannot repair this damage on the battlefield.
- *Radar Antenna or its Van or Trailer*. Functional damage prevents a radar system from acquiring, firing, or tracking missiles until the system can be repaired.

Power Plant Turbines and Generators

Power plant turbines and generators may be housed in separate structures or together in a single structure called a "generator hall." Physical damage to the turbine or generator units can be difficult to identify if the generator hall remains relatively intact. Therefore, damage estimates to the units are based upon the location of the weapon detonation and on the physical damage to the building itself. The closer to the floor a weapon detonates, the greater the probability of unit damage. The extent and location of structural damage, as opposed to roof-panel damage, is another indicator of unit damage; the greater the wall damage and structural collapse, the greater the likelihood that the unit(s) is damaged or destroyed under the rubble.

Physical Damage. When performing combat assessment on a generator hall, the patrol reports physical damage to both the building, refer to "buildings" section, and the turbines or generators located inside. When reporting physical damage, the patrol reports the number of turbines or generators that are damaged and destroyed out of the total number of units at the facility. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Damage*. Military action has caused no apparent weapon penetration of unit, but the environmental housing over the unit has sustained damage and is disfigured. The unit may also have been displaced from its foundation.
- *Destruction*. Military action has breached or penetrated the turbine or generator unit, causing extensive structural deformation, or completely torn apart the unit; this is a catastrophic kill.

Functional Damage. Power plants with free-standing, gas-turbine units can operate independently of each other. These units are housed in light metal structures that provide environmental protection only. Destruction of only one of these units only partly degrades electrical production. Also, turbine units exemplify machines that are less vulnerable to damage than their housing, so moderately damaging the housing can have little or no effect on the units or their functioning. However, the patrol reports recuperation for both the structure and the turbines.

Rail Lines and Rail Yards

Recuperation time for destroyed rail yards may be short in duration, because new rails, repair equipment, and repair personnel might already be onsite or readily available.

Physical Damage. These definitions also indicate the rail yard's functional damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Cut*. Military action has cratered one or more tracks, prohibiting movement around the damaged area, although movement around or past the damaged area (choke point or rail yard) is still possible on undamaged tracks.
- *Destruction*. Military action has caused multiple cuts to multiple tracks, which keeps rolling stock from moving around or past the damaged area (choke point or rail yard).

Functional Damage. The location(s) of rail yard "cuts" and the ability of the yard to bypass the damage determines the extent of functional damage to the rail yard.

Roads

Where geographically possible, an alternative to damaging a road with one or more craters is to attack the adjacent hillside to cause a landslide to cover the road.

Physical Damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Cratered*. Military action has cratered the road, but vehicles can maneuver around the damaged section.
- *Cut.* Military action has caused so many aligned and close-set craters that vehicles cannot pass.

Functional Damage. The effectiveness of attacks on roads depends on reducing or stopping traffic flow. Estimating flow reduction and road repair requirements are based on: whether and what vehicles the adjacent terrain allows bypass of the damaged road section; the depth and width of the cratered area; the availability of repair equipment and personnel (usually readily available), etc.

Runways and Taxiways

To successfully assess runway or taxiway damage, the patrol must know the takeoff and landing capabilities of the aircraft located at the airfield. They must also know what type or category of aircraft can or cannot use the airfield. A fighter or bomber base may be considered interdicted if damage prevents normal operation of the aircraft stationed there. However, the airfield may be useable by other aircraft types that can operate on an unimproved runway. The patrol can refer to

the appropriate aircraft documents for specific aircraft minimum clear (takeoff) length and minimum clear width dimensions. The patrol also assesses nearby roads for possible aircraft use.

Physical Damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Cratered*. Military action has cratered runways or taxiways, but aircraft can maneuver around them.
- *Cut*. Military actions have caused multiple craters in line and close enough to prohibit aircraft movement around them. However, operations can occur beyond the cut.
- *Interdicted*. Military action has caused multiple cuts close enough together to prevent any takeoff or landing operations, either between the cuts or between the last cut and the runway overrun.

Functional Damage. The effectiveness of an attack on a runway or taxiway depends on whether surface craters prevent aircraft takeoff or landing.

Satellite Dishes

Before assessing damage to a satellite dish, the patrol must know the dish type (fixed or tracking) and the location of the damage.

Physical Damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Light Damage*. Military action has blown off a few reflective panels.
- *Moderate Damage*. Military action has blown off less than 25 percent of the reflective panels and either damaged the dish support structure or the feed horn, or both.
- *Severe Damage*. Military action has blown off 25-60 percent of the reflective panels, changed the antenna point, and either slightly deformed the dish or damaged the structural components, or both.
- *Destruction*. Military action has blown off more than 60 percent of the reflective panels, destroyed the feed horn, extensively deformed the dish, or knocked the dish off of its base, or any combination of these.

Functional Damage. Functional degradation to sites depends on damage to the dish or its associated control building(s), or both.

Ships

The types and locations of damage determine the ship's ability to continue offensive and defensive operations, as well as its need to return to the shipyard for repairs.

Physical Damage. Before determining the level of physical damage, the patrol must consider certain factors:

- Seaworthiness (Is the ship listing, capsized, or sunk?).
- Firepower (What are the degrees of damage to the ship's guns, launchers, and magazines? These include: surface-to-air guns, surface-to-surface guns, and anti-submarine guns.).
- Flight deck.
- Hangars.
- Aircraft elevators.
- Mobility (To what degree is the rudder [steering] damaged? How much does this degrade the ship's sustained speed capability?).
- Sensors (To what degree is the ship's search equipment damaged and capability reduced [air, surface, and subsurface]? This assessment considers radar, sonar, and fire-control measures.).
- Command, Control, and Communications (What percentage, type, and level of damage was inflicted on the pilot house, the bridge, the combat information center, the communications center, antennas, computer systems, and data links? What is the reconstitution time for each?).

Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Moderate Damage*. Military action has caused physical deformation, holes in the ship or its equipment, reduced the ship's ability to move or maneuver, or any combination of these.
- *Severe Damage*. Military action has destroyed or burned more than one-third of the superstructure or deck area, rendered major subsystems (weapons sensors, radars) inoperable, destroyed the ship's ability to move or maneuver, or any combination of these.
- *Destruction*. Military action has flooded more than one-third of the ship's waterline length. This indicates that the ship is experiencing uncontrolled flooding, and is sinking. In addition, the ship's major subsystem that supports operations is destroyed.

Functional Damage.When assessing functional damage, the patrol considers the ship's ability or inability to move and maneuver and the degree of disruption to particular ship subsystems such as its weapon-delivery capability, the functioning of its sensors, etc.

Steel Towers

Steel towers transmit electric power and can support communications antennas.

Physical Damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Damage*. Military action has damaged supports, but tower remains standing.
- *Destruction*. Military action has caused tower to collapse or topple.

Functional Damage. The level of functional damage associated with a physically damaged steel tower depends on the tower's function and on its connectivity with other target elements.

Storage Tanks for Petroleum, Oil, Lubricants

Although a POL tank may sustain damage, its contents may be retrievable and useable.

Physical Damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Light to Moderate Damage, Aboveground Tanks*. Military action has punctured top walls, side walls, or both; possibly spilled contents; caused no evidence of sustained fire; left structural integrity intact.
- *Light to Moderate Damage, Partly or Completely Underground Tanks*. Round has penetrated tank, but no secondary explosion or sustained fire has occurred.
- *Destruction*. Military action has caused at least partial collapse or buckling of side wall; or, a secondary explosion or a sustained fire has occurred, or both.

Functional Damage. Significant functional damage of a POL storage installation is expressed in terms of storage capacity rendered unusable and time required repairing or replacing this denied capacity.

Transformers

A transformer is a static electrical device that uses mutual electromagnetic induction to convert AC power from one current on one circuit to a different current on another circuit. The patrol must report the extent of external damage, if any, and the expected effects.

Physical Damage. When reporting physical damage, include the total number of transformers, and the number damaged or destroyed. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Damage*. Military action has left the structure of the unit intact, but blackened as a result of a fire or leakage of oil.
- *Destruction*. Military action has torn the structure apart or greatly distorted it. This is considered catastrophic damage.

Functional Damage. The effect of transformer damage on the target's function depends on the facility's power requirements and on the enemy's ability to reroute the power.

Tunnel Entrances or Portals

Tunnels, at best, are dangerous places for people, while some tunnels are used for passage, operations, storage, or some combination of these. When reporting damage to tunnel entrances, the patrol should also include, when possible, the estimated volume and size of the debris or rubble pile that blocks the entrance. This can help in estimating clearing and recuperation times.

Physical Damage. Physical damage to a tunnel entrance generally makes it impassable and can reduce the protection afforded to anything or anyone in the tunnel during follow-on attacks. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Light Damage*. Military action has left the portal (the approach or entrance to the tunnel) intact, but craters and debris partially block access. The doors, if any, operate as before the attack.
- *Moderate Damage*. Military action has left the portal intact, but entrance to the tunnel is completely cut off by craters or debris. The doors, if any, do not operate.
- *Severe Damage*. Military action has partly collapsed the portal, and has completely blocked any entrance to the tunnel.
- *Destruction*. Military action has completely collapsed the portal, rendering access to the tunnel impossible.

Functional Damage. The extent of functional damage depends on the size of crater(s), the degree of portal collapse, or the amount of debris blocking the entrance. Degree of functional damage also depends on the purpose of the tunnel facility. For example, a storage tunnel is much more vulnerable to entrance damage than a C2 tunnel, which depends less on ingress and egress.

The time required to repair tunnel entrances depends on the extent of damage and the availability of personnel and equipment. In addition, the tunnel might have numerous entrances. How many it has affects the level of functional damage. When reporting the functional damage to tunnel entrances, the patrol considers accessibility based on how many entrances remain useable.

Tunnel Facility Air Vents

Air vents are vital for some tunnel facilities. They bring in fresh air and remove exhaust fumes and other noxious byproducts. Closing off these vents can sometimes prevent usage of the tunnel or facility altogether. The vents are less critical for facilities used for storage only, but more critical if they contain operating equipment and people.

Physical Damage. Damage is reported as—

- *No Damage*. Military action has caused no apparent damage.
- *Damage*.Military action has partly blocked the vent opening with craters and debris. The vent structure might not be damaged.
- *Destruction*. Craters or debris completely block the vent opening.

Functional Damage.This type of damage occurs when airflow is restricted or cut off though the vent(s) in the facility. Complete elimination of airflow to or through the facility might require the destruction of multiple air vents. When reporting the functional damage of the facility vents, the patrol must divide the number of damaged vents by the total number of vents to determine the overall percentage of airflow blockage in the facility.

APPENDIX H
CERTIFICATION REQUIREMENTS

COMBAT SWIMMER

The combat swimming capability certification requirements provide a Service common standard to MAGTF commanders, GCCs, and TSOCs regarding the combat swimming capabilities that a ground reconnaissance unit possesses. The intent is that a ground reconnaissance detachment will build their certification level during their predeployment training program cycle to meet the requirements of the gaining unit. Therefore, the individual certification will only last as long as the deployment for which it was developed. The objective is that individual swimmers will gain and maintain proficiency through repetition; providing a realistic capability.

Predeployment Training

Commanders should follow the predeployment training programs outlined below as a recommended progression for their combat swimmers. (Refer to table H-1 on page H-2.) Commanders must remember that for safety and swimmer confidence, refresher training must be executed after prolonged periods out of the amphibious environment.

Training should be tailored to existing resources. Advancement to more difficult operations and night operations will only be conducted when ground reconnaissance leaders determine it is within the element's capabilities. Refer to Marine Corps Interim Publication (MCIP) 3-02.01, Marine Corps Water Survival and to MCO 1500.52_, Marine Corps Water Survival Training Program (MCWSTP).

Prerequisites

As prerequisites for each category of certification, the combat swimmer must maintain a first class PFT and first class CFT. The basic combat swimmer, category 1, must be water survival basic (WS-B) qualified and attain and maintain WS-I qualification in order to advance to categories 2 through 4. In addition to these prerequisites, the combat swimmer must be qualified in the preceding category in order to advance. For example, a Marine must be a qualified basic combat swimmer, category 1, before moving on to the basic (+) combat swimmer, category 2.

COMBATANT DIVER CERTIFICATIONS

The combatant diver capability certification requirements provide a service common standard to GCCs and TSOCs regarding the combatant diving capabilities that a ground reconnaissance unit

possesses. Category I-III certifications exist as a method to express the capability that a ground reconnaissance unit possesses when task organized and supplied to a HHQ. The unit attains the required level of capability and then maintains that capability through repetition every 120 days. The certification expresses to the HHQ the unit's capability and produces a baseline from which risk assessment can be applied to decide risk versus gain in the employment of that capability.

Commanders follow the predeployment training programs outlined below as a recommended progression for their divers. Commanders must remember that for safety and diver confidence, dive refreshers must be executed after prolonged periods of non-diving.

Training should be tailored to existing resources. Advancement to more difficult operations and night operations will only be conducted when the commanding officer and dive supervisor determine it is within the unit's capabilities.

Table H-1. Combat Swimmer Certification Requirements.

Category 1: Basic Combat Swimmer
Certifying Activities: Basic Reconnaissance Course or Command Combat Swimmer Training Program. 1. Execute surface swims: a. 500-yard pool swim (breast stroke or side stroke) in utility uniform (without boots) within 18 minutes. b. 500-yard, open-water swim in the utility uniform with fins within 15 minutes. 2. Execute swimmer proficiency drills: a. 10-yard, pool swim (lifesaving stroke) while holding a 10 pound weight out of the water with one hand. Swimmer cannot change hands during the swim. b. In a pool, rifle retrieval from a minimum depth of 9 feet and a maximum depth of 15 feet. c. In a pool, water entry from a height of 10 feet.
Category 2: Basic (+) Combat Swimmer
Certifying Activities: Basic Reconnaissance Course or Expeditionary Warfare Training Group Scout Swimmer Course. 1. Execute a 25-meter underwater swim: a. Wearing the utility uniform (without boots) enter the pool feet first, without touching the bottom or the walls, and swim 25 meters underwater without breaking the surface at any time during the swim. b. Marines will be given a total of three attempts to pass this evolution. 2. Execute water rescues (active and passive victims): a. Perform a reaching rescue. b. Perform the ease in entry and the stride jump entry. c. Perform the crawl stroke approach stroke and the breaststroke approach stroke. d. Perform front surface approach and rear surface approach. e. Perform the single armpit level off and the double armpit level off. f. Perform the wrist tow. 3. Execute a landing and withdrawal. 4. Prepare equipment for transit on a maritime platform. 5. Execute a 2,000-yard, open water surface swim in the utility uniform with fins and combat equipment within 60 minutes. 6. Collect data for a surf report. 7. Perform individual actions in a beach survey. 8. Conduct a clandestine swimmer insertion/extraction.

Table H-1. Combat Swimmer Certification Requirements–Continued.

Category 3: Intermediate Combat Swimmer
Certifying Activities: Unit endorsed pre-dive training course, Marine Combatant Divers Course, or Command Combat Swimmer Training Program. 1. Execute a surface swim: a. 2,000-yard, open water swim in the utility uniform with fins, navigation board, and combat equipment within 60 minutes. b. 5,000-yard, open water swim in the un utility uniform with fins, navigation board, and combat equipment within 3.5 hours. 2. Execute advanced swimmer proficiency drills (drown proofing): a. 50-meter, pool swim (lifesaving stroke) while holding a 10 pound weight out of the water with one hand. Swimmer cannot change hands during the swim. b. Marines will perform the following in sequential order: 1. Bobbing for 5 minutes. 2. Floating for 2 minutes. 3. Traveling/swimming for 100 meters face down. 4. No more than five bobs between travel and front flip. 5. One front flip in a vertical plane. 6. No more than five bobs between front flip and back flip. 7. One back flip in a vertical plane. 8. No more than five bobs between back flip and retrieving a face mask. 9. Descend to the bottom of the swimming pool and retrieve a face mask with teeth, ascend to the surface and bob five times with face mask still between teeth before being pulled to the side of the swimming pool.
Category 4: Advanced Combat Swimmer
Certifying Activities: Marine Combatant Divers Course or Command Combat Swimmer Training Program. 1. Execute a landing and withdrawal. 2. Execute a surface swim: a. 2,000-yard, night open water swim in the utility uniform with fins, navigation board, and combat equipment within 60 minutes. b. 10,000-yard, open water swim in the utility uniform with fins and combat equipment within 7 hours.

Tables within the Combatant Diver Certification paragraph use the following acronyms:

CE	combat equipment
CEP	combat expendable platform
CRRC	combat rubber reconnaissance craft
DPD	diver propulsion device
FMP	full mission profile
HC/LD	helocast and Limp Duck (CRRC)
LLSL	low-level static line parachute jump
LMC	launch from mother craft: LCAC, LCU, etc.
N	night
NAV	navigation dive
OTH	over the horizon operation
S	search
SBS	ship bottom search
SCUBA	self-contained underwater breathing apparatus
SUB	submarine
UBA	underwater breathing apparatus (MK-25)

Category I Qualified MCD

A category I qualified MCD is a current diver and has completed a minimum of 12 dives as outlined in table H-2. Once attained, category I currency will be maintained by conducting a UBA/NAV/CE/DPD/N dive every 120 days.

Table H-2. Category I Marine Combatant Diver Certification Requirements.

Dive Number	Dive Type	Distance (meters)	Notes
1	UBA/NAV	1,500	
2	UBA/NAV/N	1,500	
3	UBA/NAV/CE	2,000	
4	UBA/NAV/CE	2,000	
5	UBA/NAV/CE/N	2,000	
6	UBA/NAV/DPD	2,500	
7	UBA/NAV/DPD/N	2,500	
8	UBA/NAV/CE/DPD	3,000	
9	UBA/NAV/CE/DPD/N	3,000	
10	SCUBA/S	N/A	
11	SCUBA/SBS	N/A	
12	SCUBA/SBS	N/A	Category I Certified

Category II Qualified MCD.

A category II qualified MCD is a current diver and has completed a minimum of eight dives as outlined in table H-3. Once attained, category II currency will be maintained by conducting a UBA/NAV/CE/DPD/N dive with CRRC/FMP every 120 days.

Table H-3. Catergory II Marine Combatant Diver Certification Requirements.

Dive Number	Dive Type	Distance	Notes
1	UBA/NAV/CE	2 km (Subsurface)	Requires 3 km (Turtle Back)
2	UBA/NAV/CE/N	2 km (Subsurface)	Requires 3 km (Turtle Back)
3	UBA/NAV/CE/DPD	2.5 km (Subsurface)	Requires 2.5 km (Turtle Back)
4	UBA/NAV/CE/DPD/N	2.5 km (Subsurface)	Requires 2.5 km (Turtle Back)
5	UBA/NAV/CE/DPD	25 nmi	CRRC/LMC/OTH/FMP
6	UBA/NAV/CE/DPD/N	25 nmi	CRRC/LMC/OTH/FMP
7	UBA/NAV/CE/DPD	25 nmi	CRRC/HC/LD/OTH/FMP
8	UBA/NAV/CE/DPD/N	25 nmi	CRRC/HC/LD/OTH/FMP Category II Certified

Category III Qualified MCD.
A category III qualified MCD is a current diver and has completed a minimum of eight dives as outlined in table H-4. Once attained, category III currency will be maintained by conducting a UBA/NAV/CE/DPD/N dive with CRRC/FMP every 120 days.

Note: If submarine support is not available, category III(-) can be attained by conducting two additional special operations CEP FMP operations.

Table H-4. Category III Marine Combatant Diver Certification.

Dive Number	Dive Type	Distance	Notes
1	UBA/NAV/CE	2.5 km (Subsurface)	Requires 5 km (Turtle Back)
2	UBA/NAV/CE/N	2.5 km (Subsurface)	Requires 5 km (Turtle Back)
3	UBA/NAV/CE/DPD	2.5 km (Subsurface)	Requires 5 km (Surface)
4	UBA/NAV/CE/DPD/N	2.5 km (Subsurface)	Requires 5 km (Surface)
5	UBA/NAV/CE	25 nmi	CRRC/LLSL/CEP/OTH/FMP
6	UBA/NAV/CE/N	25 nmi	CRRC/LLSL/CEP/OTH/FMP
7	UBA/NAV/CE	25 nmi	CRRC/SUB/OTH/FMP
8	UBA/NAV/CE/N	25 nmi	CRRC/SUB/OTH/FMP Category III Certified

PARACHUTIST CERTIFICATIONS

The airborne capability certification requirements provide a Service common standard to GCCs and TSOCs regarding the combat parachuting capabilities that a ground reconnaissance unit possesses. Category I-III certifications exist as a method to express the capability that a ground reconnaissance unit possesses when task organized and supplied to a HHQ. The unit attains the required level of capability and then maintains that capability through repetition every 120 days. The certification expresses to the HHQ the unit's capability and produces a baseline from which risk assessment can be applied to decide risk versus gain in the employment of that capability.

Commanders follow the predeployment training programs outlined below as a recommended progression for their parachutists. Commanders must remember that for safety and parachutist confidence, jump refreshers must be executed after prolonged periods of non-jumping.

Training should be tailored to existing resources. Advancement to more difficult operations and night operations will only be conducted when the airborne commander and primary jumpmaster determine it is within the unit's capabilities.

Tables within the Parachutist Certifications paragraph use the following acronyms:

A/NT	administrative/nontactical
A/T	admininistrative/tactical (unmarked DZ)
CE	combat equipment
N	night
W	water DZ
O	supplemental oxygen

Category I Qualified Parachutist

A category I qualified parachutist is a LLSL parachutist and has completed a minimum 10 jumps using altitudes not to exceed 2,000 ft AGL. See table H-5. Once attained, category I currency will be maintained by conducting an A/NT/CE/N jump every 120 days.

Table H-5. Category I Parachutist Certification Requirements.

Jump Number	Jump Type (LLSL)	Exit Altitude (feet AGL)	Notes
1	A/NT	2,000	
2	A/NT/CE	2,000	
3	A/NT/CE	As required by aircraft type	
4	A/NT/CE	As required by aircraft type	
5	A/NT/N	As required by aircraft type	
6	A/NT/CE/N	As required by aircraft type	
7	A/NT/CE/N	As required by aircraft type	
8	A/NT/CE/N	As required by aircraft type	
9	A/NT/CE/N	As required by aircraft type	
10	A/NT/CE/N	As required by aircraft type	Category 1 Certified
11	A/NT/W	As required by aircraft type	Recommended Progression
12	A/NT/CE/W	As required by aircraft type	Recommended Progression
13	A/NT/N/W	As required by aircraft type	Recommended Progression
14	A/NT/CE/N/W	As required by aircraft type	Recommended Progression

Category II Qualified Parachutist

A category II qualified parachutist is a DBSL qualified parachutist and has completed a minimum 10 jumps using altitudes not to exceed the capabilities of the parachute system. (See table H-6 on page H-7.) Once attained, category II currency will be maintained by conducting an A/NT/CE/N/O jump every 120 days. All HAHO operations requiring the use of supplemental oxygen must be conducted in accordance with current US Air Force regulations for the High Altitude Airdrop Mission Support Program.

Table H-6. Category II Parachutist Certification Requirements.

Jump Number	Jump Type (DBSL, HAHO)	Exit Altitude Minimum/Maximum feet AGL	Notes
1	A/NT	5,500/12,999	
2	A/NT	5,500/12,999	
3	A/NT/CE	5,500/12,999	
4	A/NT/CE/O	5,500/17,999	
5	A/NT/CE/O	17,999/24,999	Required pre-breathe
6	A/NT/N	5,500/12,999	
7	A/NT/CE/N	5,500/12,999	
8	A/NT/CE/N/O	5,500/17,999	
9	A/NT/CE/N/O	5,500/17,999	
10	A/NT/CE/N/O	17,999/24,999	Required pre-breathe Category 2 certified
11	A/T	5,500/12,999	Recommended progression
12	A/T/CE	5,500/12,999	Recommended progression
13	A/T/N	5,500/12,999	Recommended progression
14	A/T/CE/N	5,500/12,999	Recommended progression
15	A/NT/W	5,500/12,999	Recommended progression
16	A/NT/CE/W	5,500/12,999	Recommended progression
17	A/NT/N/W	5,500/12,999	Recommended progression
18	A/NT/CE/N/W	5,500/12,999	Recommended progression

Category III Qualified Parachutist

A category III qualified parachutist is a MFF qualified parachutist and has completed a minimum 20 jumps using altitudes not to exceed the capabilities of the parachute system. (See table H-7 on page H-8.) Once attained, category III currency will be maintained by conducting an A/NT/CE/N/O jump every 120 days. All HALO and HAHO operations requiring the use of supplemental oxygen must be conducted in accordance with current US Air Force regulations for the High Altitude Airdrop Mission Support Program.

The TORDS (equipment) master must complete all category III jumps with TORDS (equipment) integrated into that level of training. The TORDS (personnel) master must complete a minimum of four TORDS (personnel) jumps, the remainder of the category III checklist will be TORDS (equipment) jumps. Once attained, category III currency will be maintained by conducting an A/NT/CE/N/O jump with the TORDS every 120 days.

Table H-7. Category III Parachutist Certification Requirements.

Jump Number	Jump Type (HAHO/HALO)	Exit Altitude Minimum/Maximum feet AGL	Notes
1	A/NT	7,500/12,999	
2	A/NT*	7,500/12,999	
3	A/NT/CE	7,500/12,999	
4	A/NT/CE*	7,500/12,999	
5	A/NT/CE/O	7,500/12,999	
6	A/NT/CE	7,500/12,999	
7	A/NT/CE/O*	9,500/17,999	Required pre-breathe
8	A/NT/CE	7,500/12,999	
9	A/NT/CE/O	7,500/12,999	
10	A/NT/CE/O*	17,999/24,999	Required pre-breathe
11	A/NT/N	7,500/12,999	
12	A/NT/N*	7,500/12,999	
13	A/NT/CE/N	7,500/12,999	
14	A/NT/CE/N*	7,500/12,999	
15	A/NT/CE/N/O	7,500/12,999	
16	A/NT/CE/N	7,500/12,999	
17	A/NT/CE/N/O*	9,500/17,999	Required pre-breathe
18	A/NT/CE/N	7,500/12,999	
19	A/NT/CE/N/O	7,500/12,999	
20	A/NT/CE/N/O*	17,999/24,999	Required pre-breathe Category III certified
21	A/T	5,500/12,999	Recommended progression
22	A/T/CE	5,500/12,999	Recommended progression
23	A/T/N	5,500/12,999	Recommended progression
24	A/T/CE/N	5,500/12,999	Recommended progression
25	A/NT/W	5,500/12,999	Recommended progression
26	A/NT/CE/W	5,500/12,999	Recommended progression
27	A/NT/N/W	5,500/12,999	Recommended progression
29	A/NT/CE/N/W	5,500/12,999	Recommended progression
*TORDS progression			

APPENDIX I
GEOGRAPHIC ENVIRONMENTS

Ground reconnaissance operations to support the MAGTF and other task forces are conducted in extreme climates and terrain such as that found in jungles, deserts, mountains, extremely cold areas, and urban areas. Marine Corps warfighting publications and reference publications describe conditions and operational techniques for each.

In addition to the effect extreme temperatures, humidity, and elevations have on Marines, these factors also affect vehicles, weapons and optics, communications assets, and lift capability of supporting aircraft.

JUNGLE OPERATIONS

Jungles, in their various forms, are common in tropical areas of the world; mainly Southeast Asia, Africa, and Latin America. The climate in jungles varies with location. Close to the equator, all seasons are nearly alike with rains throughout the year; farther from the equator, especially in India and Southeast Asia, jungles have distinct wet (monsoon) and dry seasons.

The jungle environment includes densely forested areas, grasslands, cultivated areas, and swamps. Dense jungle restricts ground and air observation, as well as electronic surveillance. None of these observation methods work well for collecting information on a dismounted enemy force in this environment. Such a force leaves little evidence that it has passed. Ground reconnaissance patrols have the dismounted patrolling skills, stealth, sustainment, and communications abilities required to collect battlefield intelligence and shape the battlespace under such conditions.

Insertion

Dismounted, helicopter, rough terrain parachuting, and small boat insertion work well in jungle terrain. The limited availability of LZs could require ground reconnaissance patrols to insert by rappel or fast rope. Careful coordination with adjacent or friendly forward units is necessary for foot or boat movements during close operations in the “Reconnaissance Yellow or Red Zones” to prevent fratricide.

Extraction

Ground reconnaissance patrols may be recovered by any means available, but communication and coordination are imperative when operating in a jungle environment. The SPIE system is ideally suited for extraction of a ground reconnaissance patrol from dense vegetation.

Dismounted exfiltration routes must be coordinated before the patrol uses them. Linkup operations with friendly forces require careful and deliberate coordination to the lowest element possible (company or platoon).

Communications

Dense vegetation, high humidity, and frequent rainfall make HF communications difficult. The vegetation affects radio ranges and makes setting up antennas more difficult. Also, radio components experience higher failure rates in wet environments. Using a UHF TACSAT is best when there are holes in the canopy.

DESERT OPERATIONS

Successful desert operations require adaptation to the environment and to the limitations its terrain and climate impose. Equipment and tactics must be modified and adapted to a dusty and rugged landscape where temperatures vary from extreme highs down to freezing. Visibility may change from 30 miles to 30 feet in a matter of minutes.

Deserts are arid, barren regions of the Earth incapable of supporting normal life due to lack of water. Desert terrain also varies considerably from place to place; the sole common denominator being lack of water with its consequent environmental effects, such as sparse, if any, vegetation.

To survive in the desert, ground reconnaissance patrols must approach each task systematically so that it becomes a habit. Weather and terrain are the main enemies in any military operation. However, in the desert, these threats greatly increase. Refer to MCWP 3-35.6, Desert Operations, for more information.

Operational Considerations

Leaders must consider the following in planning ground reconnaissance operations in a desert environment:

- *Batteries*. Patrols must test all batteries with a battery tester. The heat can reduce battery life by one-third. Batteries should not be stored on the ground as sand and other elements will cause a rapid drain of power.
- *Radios*. Communications equipment can rapidly overheat when in use. If overheating occurs, radios and computers will shut down. Patrols should experiment with using “chemical ice packs” to cool radios.
- *Movement.* Dismounted patrols can average 1 km/h during the day and 3 km/h at night. The GPS should be employed to aid with navigation due to few or shifting terrain features and inaccurate maps. Walking on rocks and shale can help prevent the enemy from tracking the patrol. Movement on wet or dark sand is generally quicker. Loose or dune sand leaves clearer tracks and reduces movement speed.
- *Water*. Ground reconnaissance patrols can conduct operations for only a few days without carrying an internal water resupply or being resupplied with water. During the 24 hours prior to insertion, each Marine needs to ensure that they are fully hydrated. During movement, Marines can require up to 11 quarts of water per day. When stationary, Marines can require up to 7 quarts of water per day.

A concept of employment is to place a vehicle mounted patrol in direct support of a dismounted mounted patrol to facilitate water resupply and CASEVAC. Patrols should experiment with "chemical ice packs" to cool their water or use Lister bags that naturally sweat and cool themselves.

Insertion

When inserting by helicopter, patrols should consider using LZs that may provide a lower dust signature such as a salt marsh or other hard-packed area. The distance from the LZ to the ORP must be weighed between audible compromise from the insert platform and water consumption/ energy expended during the infiltration movement.

Hide Sites and Observation Posts

Patrols should consider locating their hide sites and OPs together due to potential extended observation distances. If the hide sites and OPs are not collocated, they must be mutually supporting. The following should be considered when locating hide sies and observation posts:

- Hide site(s) and OP(s) can be camouflaged with a variety of materials, including desert netting, burlap, or bed sheets (color matched) pulled tight over a frame.
- Surveillance from a point higher than the NAI; afternoon heat (between about 1100 and 1600 hours) obscures optics at ground level due to the mirage effect, among other factors. This makes identifying objects beyond 2 to 3 km difficult.
- To identify objects at night, consider moving the OP to within 1 to 2 km of the objective or NAI.
- When constructing subsurface hides, dig them in sandy soil. To prevent sides from caving in, shore them up.

MOUNTAIN OPERATIONS

Mountains are land forms that rise more than 500 meters above the surrounding plain and are characterized by steep slopes. Slopes commonly range from 4 to 45 degrees. Cliffs and precipices may be vertical or overhanging. Mountains may consist of an isolated peak, single ridges, glaciers, snowfields, compartments, or complex ranges extending for long distances and obstructing movement. Mountains usually favor the defense; however, attacks can succeed by using detailed planning, rehearsals, surprise, and well-led troops.

Irregular mountain topography normally provides good cover and concealment. Observation varies depending on trees and scrub growth. Observation posts near ridges and peaks often provide broad areas of observation.

Helicopter movement of patrols is often limited by altitude capability, erratic wind conditions, and the lack of usable LZs.

Communications are generally difficult; relay stations might be needed for communication between the patrols and base stations. For more information, refer to MCRP 3-35.1A, *Small Unit Leader's Guide to Mountain Warfare Operations*; MCRP 3-35.1B, *Mountain Leader's*

Guide to Winter Operations; and MCRP 3-35.1C, *Mountain Leader's Guide to Mountain Warfare Operations*.

Operational Considerations

Leaders must consider the following in planning ground reconnaissance operations in a mountainous environment:

- During mountain operations, UHF TACSAT is best for primary communications, with HF as a secondary means. Refer to MCRP 3-40B.
- Use of mountaineering equipment and tactical rope suspension techniques is a must. Patrols should plan and use scaling equipment and other specialized gear, as needed.
- Patrols should be prepared to insert using rappel or fast rope due to rock formations or no availability of usable LZs.
- HALO, HAHO and LLSL parachuting are a viable means of insertion into rough terrain and water DZs.

COLD WEATHER OPERATIONS

Expertise in cold weather operations cannot be gained solely from reading publications. Practical application, training, and operational experience are necessary. Study of military operations in cold weather environments leads to one basic conclusion: mission success or failure stems from the knowledge of and experience in the cold weather environment. Marines must be prepared to survive, move, and fight in cold weather environments.

In extreme cold, ground reconnaissance patrols are hampered by the need to maintain body warmth. In deep snow, the patrols must operate on skis, snowshoes, or snowmobiles. Long-range, accurate weather forecasts are imperative to mission success. For more information, refer to MCRP 3-35.1A, *Small Unit Leader's Guide to Mountain Warfare Operations*.

OPERATIONAL CONSIDERATIONS

Leaders must consider the following in planning ground reconnaissance operations in a cold environment:

- Deep snow can conceal a hide site and OP, but it increases the difficulty of orientation and the concealment of patrols when on the move. Trafficability and load-bearing qualities of ice and snow crust are important planning considerations.
- Magnetic storms, aurora effects, and ionosphere disturbances can seriously degrade radio communications.
- Survival is difficult in extreme winter conditions. To operate for extended periods at maximum efficiency, the patrol must establish a warming area. Patrols can use heat from candles while in

a hide site. Patrols may require the use of extreme cold weather sleeping bags and tents. Goggles or dark glasses are required during operations due to the threat of snow blindness.

- Northern summer conditions are characterized by long periods of daylight, numerous water obstacles, and marshy areas. When aircraft or ground operations are restricted, patrols may be able to use boats designed to navigate northern waterways.

APPENDIX J
DEBRIEFS

Debriefing is the process of interviewing an individual who has completed an intelligence or reconnaissance patrol, or who has knowledge, whether through observation, participation, or otherwise, of operational or intelligence significance.

Level II Intelligence Report

Level II intelligence reporting by ground reconnaissance assets is conducted by the generation of the RAIDERREP. The RAIDERREP is the means by which ground reconnaissance forces submit the answers to questions posed by the supported unit commander and MAGTF commanders through CCIRs, PIRs, SIRs, and IRs. The RAIDERREP is composed of the following:

- Marginal information.
- Mission statement.
- Patrol narrative by phase.
- Considerations of key terrain.
- Observed enemy tactics.
- Map errors and modifications.
- Communications.
- Consumption rates.

RAIDERREP

DEBRIEFER:

DTG:

MISSION #:

PATROLLING UNIT:

PATROL LEADER:

SIZE/COMPOSITION OF PATROL:

ATTACHMENTS:

MOUNTED OR DISMOUNTED:

AREA/SECTOR PATROLLED:

PERSON(S) BEING DEBRIEFED:

WEATHER AND EFFECTS ON MISSION:

1. MISSION STATEMENT (include CCIRs, PIRs, SIRs, and IRs along with the answers)
2. PATROL NARRATIVE
    a. Phase I. Insertion (include macro imagery of AO).
    b. Phase II. Infiltration (include micro imagery of patrol route).
    c. Phase III. Actions on the Objective (include relevant ground perspective imagery and Level I Intelligence Reports collected).
    d. Phase IV. Exfiltration (include micro imagery of patrol route).
    e. Phase V. Extraction.
3. IDENTIFY KEY TERRAIN
    a. Considerations of KOCOA.
    b. Effects of terrain on enemy and friendly patrol.

c. Effects of weather on enemy and friendly patrol.

d. Include weather data forecasted for the patrol and actual weather encountered.

4. OBSERVED ENEMY TACTICS

5. MAP ERRORS AND MODIFICATIONS

6. COMMUNICATIONS

a. Communications equipment used during patrol.

b. Antennas used during patrol (include location, type, successful or not).

c. Interference or EW measures encountered during patrol.

(1) Location, type, effects.

(2) Countermeasures employed, successful or not.

d. Recommendations for follow-on forces.

7. CONSUMPTION RATES

a. Batteries (include all electronic devices employed during the patrol).

(1) Radios, computers, GPS, NVGs, optics, etc.

b. Food and water.

(1) Include amount during insertion and amount remaining after extraction.

(2) Include amounts gained during internal or external resupply.

(3) Recommendations to follow-on forces.

c. Fuel.

(1) Include initial load out and amount remaining after extraction.

(2) Include amounts consumed by vehicle type during operation.

(3) Recommendations to follow-on forces.

d. Ammunition and pyrotechnics.

(1) Include initial load out and amount remaining after extraction.

(2) Include amounts consumed by DOD identification code during operation.

(3) Recommendations to follow-on forces.

Level III Intelligence Debrief

The intelligence debrief is the means by which the intelligence sections capture information of tactical, operational, or strategic value that was collected by all-source collection operations. The intelligence debrief fuses together reporting from across the MCISR-E or was discovered during the intelligence sections' debriefing of patrols.

Refer to the example of ground reconnaissance intelligence debrief on the following pages.

DEBRIEF

TEAM:

MISSION NUMBER:

DTG OF DEPARTURE:

DTG OF RETURN:

MAPS USED: List maps team actually used on mission.

1:24,000

1:50,000

1:250,000

SPECIAL (PHOTOS):

ENCLOSURES: (This includes the patrol log, communications log, surveillance log, sketches, and so on.)

1. VISUAL RECONNAISSANCE

    a. Primary loading date, alternate landing zone data, or both (size, MOG, obstacles, slope, vegetation, immediate surroundings).

    b. Significant enemy sightings during the mission (SALUTEREP).

    c. Indications of enemy activities such as tracks, trash, and sounds.

2. ORGANIZATION

    a. General patrol personnel.

    b. Special patrol personnel.

3. EQUIPMENT

   a. Individual primary small arms.

   b. Alternate or crew-served weapons.

   c. Mines.

   d. Grenades.

   e. Boobytraps.

   f. Demolitions.

   g. Special weapons.

   h. FM radios (VHF).

   i. HF radios.

   j. Smoke grenades.

   k. VS-17 panels.

   l. Strobe lights.

   m. Pen flares.

   n. Compasses, PSN-11, and so on.

   o. Flashlights.

   p. Individual items.

   q. Optical equipment.

   r. Maps.

   s. Photographic equipment

4. MISSION (this is an exact duplicate of the mission assigned to the team)

5. SIR TO PIR OR ISR TASKS TO PIR (this also includes SIR to intelligence requirements or ISR tasks to intelligence requirements)

6. TERRAIN

   a. Land forms.

   b. Vegetation.

      (1) Lowland.

      (2) Ridge and mountain sides.

      (3) High ground, ridge tops, and hill tops.

   c. Rivers and streams.

      (1) Location.

      (2) Width.

      (3) Depth.

      (4) Current (speed and direction).

      (5) Slopes of the bank.

      (6) Composition of the soil on bottom of banks.

      (7) Dimension of the dry bed.

      (8) Navigability of large streams.

      (9) Potability of water.

   d. Observations of civilian activity.

      (1) Where were the people seen?

      (2) When were they observed?

      (3) How many people were seen?

      (4) Were they civilian or military?

      (5) What was their ethnic group(s), language(s), and so on?

      (6) What clothing (color, condition), footgear, and headgear were they wearing?

      (7) What kind of equipment did they have (color, size, shape, condition)?

(8) What were the people doing?

(9) What was the physical condition of the people observed (morale and discipline)?

e. Observations of structures and other manmade objects.

(1) Location(s).

(2) Quantity.

(3) Shape(s), size(s), purpose(s).

(4) Construction materials.

(5) Markings.

(6) Contents of structure.

(7) Estimate of last use.

(8) Indications of occupancy.

(9) Animals or animal pens in vicinity.

(10) Crops in vicinity.

(a) Type.

(b) Field or paddy size.

(c) Care of the area.

(d) Stage of development.

(e) Food and water storage area(s).

(11) Trenches, fighting holes, bunkers, or advanced warning positions (location, size, number, description of each).

(a) Stage of development.

(b) Efforts to hide from aerial view.

f. Observations of animals.

(1) What type, where, and when?

(2) Wild or tame?

(3) Condition of health?

(4) Presence of vectors?

g. Enemy tactics.

(1) What was the enemy's reaction time, if contact was made?

(2) How does the enemy employ counterreconnaissance assets?

(3) Was the patrol tracked at any time?

(4) Did the enemy try to break contact?

(5) What action did the enemy take when aircraft flew over?

(6) What reaction did the enemy have when it was attacked?

(7) Any signals used (visual, sound, voice)?

(8) Unit discipline.

(9) Are enemy personnel well-trained?

(10) What type of equipment is the enemy using?

h. Trails (identify by number as located during the mission).

(1) Direction and location.

(2) Width.

(3) Estimate of use (animals or man).

(4) Overhead canopy.

(5) Undergrowth along sides of trails.

(6) Direction signs, symbols, target indicators on trail.

(7) Surface characteristics (hard-packed or soft earth, dead vegetation).

(8) Description of vehicle tracks.

i. Roads.

(1) Direction (in degrees) and location.

(2) Width (in meters).

(3) Surface material. This includes sand, packed earth, gravel surfaced, asphalt, concrete, and so on.

(4) Indications of movement on the road.

(5) Maintenance of road (craters repaired, pot holes, and so on).

(6) Road drainage characteristics (crown and camber, drainage ditches, and so on).

(7) Obstructions.

(8) Road signs, markers, and so on.

(9) Description of vehicle tracks (if applicable).

j. Soil.

(1) Appearance (color).

(2) Composition (clay, sand, rocky, roots, loam, and so on).

(3) Hardness (dry, wet, muddy, very muddy).

(4) Ease of digging (fast, medium, slow).

(5) Standing water.

k. Map correction (includes landforms, tree lines, waterways, roads, trails, built-up areas, and so on).

7. WEATHER

a. Visibility.

b. Cloud cover.

c. Rainfall.

d. Ground fog.

e. Winds.

f. Temperatures and humidity.

g. Illumination at night.

h. Effects of weather on team personnel.

8. COMMUNICATIONS (state whether or not you have or had any of the following)

a. Jamming?

b. Problems at relay site?

c. Difficulties in radio sets?

d. Signs of enemy direction-finding capabilities?

e. Most effective frequency?

f. Most effective time?

g. Most effective antennae?

9. NARRATIVE (this narrative is a chronological detailed statement emphasizing time, movement activities, and observations within the area of observation [provide an overlay])

a. Date-time group and place.

b. Movement.

(1) Movement by foot (direction and distance).

(2) Danger areas (locations).

(3) Actions on objective (direction, distance, and so on).

(4) Extraction (direction, distance, and so on).

10. ADDED INFORMATION

a. Anything not already covered.

b. General estimate of military activity in the area.

c. Signals.

11. RECOMMENDATIONS

a. Items of equipment or material that can or should be improved to further enhance operational ability.

b. Operational techniques that could have improved the mission.

c. Lost or unrecovered equipment.

12. CONDITION OF PATROL

a. Water intake.

b. Food intake.

c. Minor injuries and illness.

d. Remarks. (Include when team will be ready to execute another mission.)

Team Leader

Print _____

Sign _____

Date _____

Debriefer(s)

Print _____

Sign _____

Date _____

DTG of Debrief _____

GLOSSARY

Section I. Acronyms

AAV ..... amphibious assault vehicle
AC/S G-2 ..... assistant chief of staff, intelligence
ACE ..... aviation combat element
AFO ..... advance force operations
AGL ..... above ground level
AO ..... area of operations
AOI ..... area of interest
ATF ..... amphibious task force
ATO ..... air tasking order
ATV ..... all-terrain vehicle

BAMCIS ..... begin planning, arrange for reconnaissance, make reconnaissance, complete the plan, issue the order, supervise
BDA ..... battle damage assessment
BLS ..... beach landing site
BRC ..... Basic Reconnaissance Course

C2 ..... command and control
CAS ..... close air support
CASEVAC ..... casualty evacuation
CATF ..... commander, amphibious task force
CBRN ..... chemical, biological, radiological, and nuclear
CCIR ..... commander's critical information requirement
CEP ..... combat expendable platform
CI ..... counterintelligence
CIS ..... communications and information systems
CLF ..... commander, landing force
CM ..... cast master
CM/DO ..... collection management/dissemination officer
COA ..... course of action
COC ..... combat operations center
COIN ..... counterinsurgency
COMSEC ..... communications security
COP ..... common operational picture
CP ..... command post
CRRC ..... combat rubber reconnaissance craft
CSAR ..... combat search and rescue

DA ..... direct action
DAR ..... designated area of recovery
DBSL ..... double-bag static line
DOD ..... Department of Defense
DPD ..... diver propulsion device
DTG ..... date-time group
DZ ..... drop zone

E&E ..... evasion and escape
E&R ..... evasion and recovery
EPA ..... evasion plan of action
EPW ..... enemy prisoner of war
EW ..... electronic warfare

FAC ..... forward air controller
FFC ..... force fires cell
FID ..... foreign internal defense
FMP ..... full mission profile
FOB ..... forward operating base
FORECON ..... force reconnaissance
FRAGO ..... fragmentary order
FSCC ..... fire support coordination center
FSW ..... feet of seawater
ft ..... feet
FWD ..... forward

GCC ..... geographic combatant commander
GCE ..... ground combat element
GI&S ..... geospatial information and services
GPS ..... Global Positioning System
GSP ..... ground sensor platoon

H&S ..... headquarters and service
HAHO ..... high-altitude high-opening parachute technique
HALO ..... high-altitude low-opening parachute technique
HDPC ..... hand-deployed pilot chute
HF ..... high frequency
HHQ ..... higher headquarters
HMMWV ..... high mobility multipurpose wheeled vehicle
HN ..... host nation
HP ..... horsepower
HRST ..... helicopter rope suspension techniques
HUMINT ..... human intelligence

IDC ..... independent duty corpsman
IMINT ..... imagery intelligence
IOC ..... intelligence operations center

IP ..... initial point
IPB ..... intelligence preparation of the battlespace
IR ..... intelligence requirement
ISC ..... intelligence support coordinator
ISOPREP ..... isolated personnel report
ISR ..... intelligence, surveillance, and reconnaissance
ITG ..... initial terminal guidance
I&W ..... indications and warning

JFC ..... joint force commander
JFO ..... joint fires observer
JP ..... joint publication
JPRA ..... Joint Personnel Recovery Agency
JTAC ..... joint terminal attack controller
JTF ..... joint task force

km ..... kilometer
km/h ..... kilometers per hour
kt ..... knots
KOCOA ..... key terrain, observation and fields of fire, cover and concealment, obstacles, avenues of approach
kW ..... kilowatts

LAN ..... local area network
lbs ..... pounds
LCAC ..... landing craft, air cushion
LLSL ..... low-level static line
LNO ..... liaison officer
LOS ..... line of sight
LZ ..... landing zone

MAGTF ..... Marine air-ground task force
MARDIV ..... Marine division
MARSOC ..... United States Marine Corps Forces, Special Operations Command
MART ..... Marines Awaiting Reconnaissance Training
MASINT ..... measurement and signature intelligence
MCD ..... Marine combatant diver
MCDP ..... Marine Corps doctrinal publication
MCIP ..... Marine Corps interim publication
MCISR-E ..... Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise
MCPP ..... Marine Corps Planning Process
MCRP ..... Marine Corps reference publication
MCWP ..... Marine Corps warfighting publication
MEF ..... Marine expeditionary force
METT–T ..... mission, enemy, terrain and weather, troops and support available–time available
MEU ..... Marine expeditionary unit

MFF ..... military free fall
MLG ..... Marine logistics group
mm ..... millimeter
MMPC ..... Multi-Mission Parachutist Course
MMPS ..... multi-mission parachute system
MOS ..... military occupational specialty
mph ..... miles per hour
MSC ..... major subordinate command
MSIDS ..... MAGTF secondary imagery dissemination system
MSL ..... mean sea level
MTTB ..... military tandem tethered bundle

NAI ..... named area of interest
NCO ..... noncommissioned officer
NEO ..... noncombatant evacuation operation
NFA ..... no-fire area
nmi ..... nautical mile
NMOS ..... necessary military occupational specialty
NSFS ..... naval surface fire support
NVG ..... night vision goggle

OIC ..... officer in charge
OMFTS ..... operational maneuver from the sea
OP ..... observation post
OPCON ..... operational control
OPLAN ..... operation plan
OPORD ..... operation order
OPSEC ..... operations security
ORP ..... objective rally point
OTH ..... over the horizon

P&A ..... production and analysis
PDE&A ..... planning, decision, execution, and assessment
PI ..... point of impact
PIR ..... priority intelligence requirement
PME ..... professional military education
PMOS ..... primary military occupational specialty
POL ..... petroleum, oils, and lubricants
POW ..... prisoner of war
PZ ..... pickup zone

QRF ..... quick reaction force

RAIDERREP ..... reconnaissance after-action, information, dissemination, and exploitation report
RCC ..... rescue coordination center
RFA ..... restrictive fire area

RFI ..... request for intelligence
ROC ..... reconnaissance operations center
ROE ..... rules of engagement
RP ..... release point
RTC ..... Reconnaissance Training Company
RTLC ..... Reconnaissance Team Leaders Course
RTO ..... radiotelephone operator
RULC ..... Reconnaissance Unit Leaders Course

SAFE ..... selected area for evasion
SARCC ..... surveillance and reconnaissance coordination center
SCUBA ..... self-contained underwater breathing apparatus
SEAL ..... sea, air, land
SERE ..... survival, evasion, resistance, and escape
SIGINT ..... signals intelligence
SINCGARS ..... single-channel ground and airborne radio system
SIR ..... specific information requirement
SLD ..... static line drogue
SNCO ..... staff noncommissioned officer
SOF ..... special operations forces
SOP ..... standing operating procedure
SPIE ..... special patrol insertion and extraction
SPINS ..... special instructions
SSD ..... self-set drogue

T&R ..... training and readiness
TACSAT ..... tactical satellite
TL ..... team leader
TM ..... technical manual
TO ..... table of organization
TORDS ..... tandem offset resupply delivery system
TRAP ..... tactical recovery of aircraft and personnel
TSC ..... theater security cooperation
TSOC ..... theater special operations command
TTP ..... tactics, techniques, and procedures

UAS ..... unmanned aircraft system
UBA ..... underwater breathing apparatus
UHF ..... ultrahigh frequency
URC ..... underwater reconnaissance capability
US ..... United States
USC ..... United States Code
USSOCOM ..... United States Special Operations Command

VHF ..... very high frequency

WARNORD ..... warning order
WS-I ..... water survival-instructor

XO ..... executive officer

yd ..... yard

Section II. Terms and Definitions

amphibious task force—A Navy task organization formed to conduct amphibious operations. Also called **ATF**. (JP 1-02)

area of interest—That area of concern to the commander, including the area of influence, areas adjacent thereto, and extending into enemy territory. This area also includes areas occupied by enemy forces who could jeopardize the accomplishment of the mission. Also called **AOI**. (JP 1-02)

area of operations—An operational area defined by the joint force commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces. Also called **AO**. (JP 1-02)

aviation combat element—The core element of a Marine air-ground task force (MAGTF) that is task-organized to conduct aviation operations. The aviation combat element (ACE) provides all or a portion of the six functions of Marine aviation necessary to accomplish the MAGTF's mission. These functions are antiair warfare, offensive air support, assault support, electronic warfare, air reconnaissance, and control of aircraft and missiles. The ACE is usually composed of an aviation unit headquarters and various other aviation units or their detachments. It can vary in size from a small aviation detachment of specifically required aircraft to one or more Marine aircraft wings. In a joint or multinational environment, the ACE may contain other Service or multinational forces assigned or attached to the MAGTF. The ACE itself is not a formal command. Also called **ACE**. (MCRP 5-12C)

battle damage assessment—(See JP 1-02 for core definition. Marine Corps amplification follows.) The timely and accurate estimate of the damage resulting from the application of military force. Battle damage assessment estimates physical damage to a particular target, functional damage to that target, and the capability of the entire target system to continue its operations. Also called **BDA**. (MCRP 5-12C)

casualty evacuation—(See JP 1-02 for core definition. Marine Corps amplification follows.) The movement of the sick, wounded, or injured. It begins at the point of injury or the onset of disease. It includes movement both to and between medical treatment facilities. All units have an evacuation capability. Any vehicle may be used to evacuate casualties. If a medical vehicle is not used it should be replaced with one at the first opportunity. Similarly, aeromedical evacuation should replace surface evacuation at the first opportunity. Also called **CASEVAC**. (MCRP 5-12C)

close air support—Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. Also called **CAS**. (JP 1-02)

combat operations center—The primary operational agency required to control the tactical operations of a command that employs ground and aviation combat, combat support, and

logistics combat elements or portions thereof. The combat operations center continually monitors, records, and supervises operations in the name of the commander and includes the necessary personnel and communications to do the same. Also called **COC**. (MCRP 5-12C)

combat search and rescue—The tactics, techniques, and procedures performed by forces to effect the recovery of isolated personnel during combat. Also called **CSAR**. (JP 1-02)

command and control—The means by which a commander recognizes what needs to be done and sees to it that appropriate actions are taken. Command and control is one of the six warfighting functions. Also called **C2**. (MCRP 5-12C)

commander, amphibious task force—The Navy officer designated in the initiating directive as the commander of the amphibious task force. Also called **CATF**. (JP 1-02)

commander's critical information requirements—(See JP 1-02 for core definition. Marine Corps amplification follows.) Information regarding the enemy and friendly activities and the environment identified by the commander as critical to maintaining situational awareness, planning future activities, and facilitating timely decisionmaking. The two subcategories are priority intelligence requirements and friendly force information requirements. Also called **CCIRs**. (MCRP 5-12C)

commander, landing force—The officer designated in the initiating directive as the commander of the landing force for an amphibious operation. Also called **CLF**. (JP 1-02)

common operational picture—A single identical display of relevant information shared by more than one command that facilitates collaborative planning and assists all echelons to achieve situational awareness. Also called **COP**. (JP 1-02)

communications security—The protection resulting from all measures designed to deny unauthorized persons information of value that might be derived from the possession and study of telecommunications, or to mislead unauthorized persons in their interpretation of the results of such possession and study. Also called **COMSEC**. (JP 1-02)

counterintelligence—(See JP 1-02 for core definition. Marine Corps amplification follows.) The active and passive measures intended to deny the enemy valuable information about the friendly situation, to detect and neutralize hostile intelligence collection, and to deceive the enemy as to friendly capabilities and intentions. (MCRP 5-12C)

course of action—1. Any sequence of activities that an individual or unit may follow. 2. A scheme developed to accomplish a mission. 3. A product of the course-of-action development step of the joint operation planning process. Also called **COA**. (JP 1-02)

counterinsurgency—Comprehensive civilian and military efforts designed to simultaneously defeat and contain insurgency and address its root causes. Also called **COIN**. (JP 1-02)

direct action—Short-duration strikes and other small-scale offensive actions conducted as a special operation in hostile, denied, or diplomatically sensitive environments and which employ

specialized military capabilities to seize, destroy, capture, exploit, recover, or damage designated targets. Also called **DA**. (JP 1-02)

drop zone—A specific area upon which airborne troops, equipment, or supplies are airdropped. Also called **DZ**. (JP 1-02)

electronic warfare—Military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Also called **EW**. (JP 1-02)

evasion plan of action—A course of action, developed prior to executing a combat mission, that is intended to improve a potential isolated person's chances of successful evasion and recovery by providing the recovery forces with an additional source of information that can increase the predictability of the evader's action and movement. Also called **EPA**. (JP 1-02)

fire support coordination center—A single location in which are centralized communications facilities and personnel incident to the coordination of all forms of fire support for Marine forces. Also called **FSCC**. (JP 1-02)

foreign internal defense—(See JP 1-02 for core definition. Marine Corps amplification follows.) Participation by civilian, military, and law enforcement agencies of a government in any of the action programs taken by another government or other designated organization to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security. Also called **FID**. (MCRP 5-12C)

forward air controller—An officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft in close air support of ground troops. Also called **FAC**. (JP 1-02)

forward operating base—An airfield used to support tactical operations without establishing full support facilities. Also called **FOB**. (JP 1-02)

geospatial information and services—The collection, information extraction, storage, dissemination, and exploitation of geodetic, geomagnetic, imagery, gravimetric, aeronautical, topographic, hydrographic, littoral, cultural, and toponymic data accurately referenced to a precise location on the Earth's surface. Also called **GI&S**. (JP 1-02)

ground combat element—Task-organized to conduct ground operations. It is usually constructed around an infantry organization but can vary in size from a small ground unit of any type to one or more Marine divisions that can be independently maneuvered under the direction of the MAGTF commander. It includes appropriate ground combat and combat support forces, and in a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the MAGTF. The ground combat element itself is not a formal command. Also called **GCE**. (MCRP 5-12C)

host nation—A nation which receives the forces and/or supplies of allied nations and/or NATO organizations to be located on, to operate in, or to transit through its territory. Also called **HN**. (JP 1-02)

human intelligence—A category of intelligence derived from information collected and provided by human sources. Also called **HUMINT**. (JP 1-02)

imagery intelligence—The technical, geographic, and intelligence information derived through the interpretation or analysis of imagery and collateral materials. Also called **IMINT**. (JP 1-02)

initial terminal guidance—A mission normally assigned to reconnaissance units to provide the helicopter coordinator (airborne) with information resulting from prelanding reconnaissance. The units establish and operate signal devices for guiding the initial helicopter waves from the initial point to the landing point. Also called **ITG**. (MCRP 5-12C)

intelligence preparation of the battlespace—(See JP 1-02 for core definition. Marine Corps amplification follows.) The systematic, continuous process of analyzing the threat and environment in a specific geographic area. Also called **IPB**. (MCRP 5-12C)

intelligence requirements—(See JP 1-02, intelligence requirement, for core definition. Marine Corps amplification follows.) Questions about the enemy and the environment, the answers to which a commander requires to make sound decisions. Also called **IRs**.(MCRP 5-12C)

intelligence, surveillance, and reconnaissance—An activity that synchronizes and integrates the planning and operation of sensors, assets, and processing, exploitation, and dissemination systems in direct support of current and future operations. This is an integrated intelligence and operations function. Also called **ISR**. (JP 1-02)

joint task force—A joint force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint task force commander. Also called **JTF**. (JP 1-02)

landing zone—Any specified zone used for the landing of aircraft. Also called **LZ**. (JP 1-02)

line of sight—The unobstructed path from a Marine, weapon, weapon sight, electronic sending and receiving antennas, or piece of reconnaissance equipment to another point. Also called **LOS**. (MCRP 5-12C)

Marine air-ground task force—The Marine Corps' principal organization for all missions across a range of military operations, composed of forces task-organized under a single commander capable of responding rapidly to a contingency anywhere in the world. The types of forces in the Marine air-ground task force (MAGTF) are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a logistics combat element. The four core elements are categories of forces, not formal commands. The basic structure of the MAGTF never varies, though the number, size, and type of Marine Corps units comprising each of its four elements will always be mission dependent. The flexibility of the organizational structure allows for one or more subordinate MAGTFs to be assigned. In a joint or multinational environment, other Service or multinational forces may be assigned or attached. Also called **MAGTF**. (MCRP 5-12C)

Marine division—A ground force of combat and combat support units organized and equipped primarily for amphibious operations. It consists of three infantry regiments, an artillery regiment, and separate combat support battalions. Subordinate units can be organized into effective forces of combined arms based upon the infantry regiment, infantry battalion, or tank battalion. One or more divisions form the ground combat element of the Marine expeditionary force. To perform its combat role, it requires air defense and aviation support from a Marine aircraft wing and service support from a Marine logistics group. Also called **MARDIV**. (MCRP 5-12C)

Marine expeditionary force—The largest Marine air-ground task force (MAGTF) and the Marine Corps' principal warfighting organization, particularly for larger crises or contingencies. It is task-organized around a permanent command element and normally contains one or more Marine divisions, Marine aircraft wings, and Marine logistics groups. The Marine expeditionary force is capable of missions across a range of military operations, including amphibious assault and sustained operations ashore in any environment. It can operate from a sea base, a land base, or both. In a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the MAGTF. Also called **MEF**. (MCRP 5-12C)

Marine expeditionary unit—A Marine air-ground task force (MAGTF) that is constructed around an infantry battalion reinforced, a composite squadron reinforced, and a task-organized logistics combat element. It normally fulfills Marine Corps' forward sea-based deployment requirements. The Marine expeditionary unit provides an immediate reaction capability for crisis response and is capable of limited combat operations. In a joint or multinational environment, it may contain other Service or multinational forces assigned or attached to the MAGTF. Also called **MEU**. (MCRP 5-12C)

Marine logistics group—The logistics combat element (LCE) of the Marine expeditionary force (MEF). It is a permanently organized command tasked with providing combat service support beyond the organic capabilities of supported units of the MEF. The Marine logistics group (MLG) is normally structured with direct and general support units, which are organized to support a MEF possessing one Marine division and one Marine aircraft wing. The MLG may also provide smaller task-organized LCEs to support Marine air-ground task forces smaller than a MEF. Also called **MLG**. (MCRP 5-12C)

measurement and signature intelligence—(See JP 1-02 for core definition. Marine Corps amplification follows.) Intelligence information gathered by technical instruments such as radars, passive electro-optical sensors, radiation detectors, and remote ground sensors. Also called **MASINT**. (MCRP 5-12C)

mission, enemy, terrain and weather, troops and support available–time available—1. In the context of information management, the major subject categories into which relevant information is grouped for military operations. 2. In the context of tactics, the major factors considered during mission analysis. Also called **METT-T**. (MCRP 5-12C)

named area of interest—(See JP 1-02 for core definition. Marine Corps amplification follows.) A point or area along a particular avenue of approach through which enemy activity is expected to occur. Activity or lack of activity within a named area of interest will help to confirm or deny a particular enemy course of action. Also called **NAI**. (MCRP 5-12C)

no-fire area—(See JP 1-02 for core definition. Marine Corps amplification follows.) Two exceptions occur: (a) the establishing headquarters asks for or approves fire or (b) an enemy force takes refuge in the area, poses a major threat, and there is insufficient time to clear the fires needed to defend the friendly force. Also called **NFA**. (MCRP 5-12C)

noncombatant evacuation operations—Operations directed by the Department of State or other appropriate authority, in conjunction with the Department of Defense, whereby noncombatants are evacuated from foreign countries when their lives are endangered by war, civil unrest, or natural disaster to safe havens as designated by the Department of State. Also called **NEOs**. (JP 1-02)

operational control—(See JP 1-02 for core definition. Marine Corps amplification follows.) With respect to a flight, the exercise of authority over initiating, conducting, or terminating a flight. (MCRP 5-12C)

operation order—A directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. Also called **OPORD**. (JP 1-02)

operation plan—1. Any plan for the conduct of military operations prepared in response to actual and potential contingencies. 2. A complete and detailed joint plan containing a full description of the concept of operations, all annexes applicable to the plan, and a time-phased force and deployment data. Also called **OPLAN**. (JP 1-02)

operations security—A process of identifying critical information and subsequently analyzing friendly actions attendant to military operations and other activities. Also called **OPSEC**. (JP 1-02)

pickup zone—The zone in which helicopters land to pick up troops and supplies for movement to the landing zone. (MCRP 5-12C)

priority intelligence requirement—(See JP 1-02 for core definition. Marine Corps amplification follows.) An intelligence requirement associated with a decision that will critically affect the overall success of the command's mission. Also called **PIR**. (MCRP 5-12C)

prisoner of war—A detained person (as defined in Articles 4 and 5 of the Geneva Convention Relative to the Treatment of Prisoners of War of August 12, 1949) who, while engaged in combat under orders of his or her government, is captured by the armed forces of the enemy. Also called **POW** or **PW**. (JP 1-02)

professional military education—The systematic instruction of professionals in subjects that will enhance their knowledge of the science and art of war. Also called **PME**.

restrictive fire area—An area in which specific restrictions are imposed and into which fires that exceed those restrictions will not be delivered without coordination with the establishing headquarters. Also called **RFA**. (JP 1-02)

rules of engagement—Directives issued by competent military authority that delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered. Also called **ROE**. See also **law of war**. (JP 1-02)

signals intelligence—1. A category of intelligence comprising either individually or in combination all communications intelligence, electronic intelligence, and foreign instrumentation signals intelligence, however transmitted. 2. Intelligence derived from communications, electronic, and foreign instrumentation signals. Also called **SIGINT**. (JP 1-02)

survival, evasion, resistance, and escape—Actions performed by isolated personnel designed to ensure their health, mobility, safety, and honor in anticipation of or preparation for their return to friendly control. Also called **SERE**. (JP 1-02)

tactical recovery of aircraft and personnel—A Marine Corps mission performed by an assigned and briefed aircrew for the specific purpose of the recovery of personnel, equipment, and/or aircraft when the tactical situation precludes search and rescue assets from responding and when survivors and their location have been confirmed. Also called **TRAP**. (JP 1-02)

theater special operations command—A subordinate unified command established by a combatant commander to plan, coordinate, conduct, and support joint special operations. Also called **TSOC**. (JP 1-02)

unmanned aircraft system—That system whose components include the necessary equipment, network, and personnel to control an unmanned aircraft. Also called **UAS**. (JP 1-02)

REFERENCES AND RELATED RESOURCES

United States Code

Title 10,	Armed Forces, subtitle A, part 1, chap. 18 "Military Support for Civilian Law Enforcement Agencies," sec. 371–378
Title 18,	US Code Section 1385 (the Posse Comitatus Act)

Joint Publications (JPs)

1-02	Department of Defense Dictionary of Military and Associated Terms
2-01	Joint and National Intelligence Support to Military Operations
3-02	Amphibious Operations
3-05	Special Operations
3-05.1	Joint Special Operations Task Force Operations
3-07	Stability Operations
3-07.2	Antiterrorism
3-08	Interorganizational Coordination During Joint Operations
3-50	Personnel Recovery
3-60	Joint Targeting

Department of Defense Instruction (DODI)

3025.21	Defense Support of Civilian Law Enforcement Agencies

Army Publications

Field Manuals (FMs)

3-05.160	Army Special Operations Forces Communications Systems
3-05.210	Special Forces Air Operations
3-05.213	Special Forces Use of Pack Animals
3-21.38	Pathfinder Operations
3-55.93	Long-Range Surveillance Unit Operations
3-97.6	Mountain Operations

Marine Corps Publications

Marine Corps Doctrinal Publications (MCDPs)

1-0	Marine Corps Operations
2	Intelligence

Marine Corps Warfighting Publications (MCWPs)

2-1	Intelligence Operations
2-22	Signals Intelligence
2-26	Geospatial Information and Intelligence
2-3	MAGTF Intelligence Production and Analysis
3-11.3	Scouting and Patrolling
3-11.4	Helicopterborne Operations
3-15.3	Sniping
3-15.7	Static Line Parachuting Techniques and Training
3-16.4	Tactics, Techniques, and Procedures for the Field Artillery Manual Cannon Gunner
3-17.4	Engineer Reconnaissance
3-35.1	Mountain Warfare Operations
3-35.5	Jungle Operations
3-35.6	Desert Operations
3-40.3	MAGTF Communications System
3-43.1	Raid Operations
5-1	Marine Corps Planning Process

Marine Corps Reference Publications (MCRPs)

2-24B	Remote Sensor Operations
2-25A	Reconnaissance Reports Guide
3-02H	Multi-Service Tactics, Techniques, and Procedures for Survival, Evasion, and Recovery
3-11.3A	Special Forces Waterborne Operations
3-11.4A	Helicopter Rope Suspension Techniques (HRST) Operations
3-35.1A	Small Unit Leader's Guide to Mountain Warfare Operations
3-35.1B	Mountain Leader's Guide to Winter Operations
3-35.1C	Mountain Leader's Guide to Mountain Warfare Operations
3-35.1E	Special Forces Use of Pack Animals
3-35.9A	Military Diving Operations
3-40.3B	Radio Operator's Handbook
5-12D	Organization of Marine Corps Forces

Marine Corps Interim Publications (MCIPs)

3-02.01	Marine Corps Water Survival
3-33.04	Visit, Board, Search, and Seizure Operations

Marine Corps Orders (MCOs)

1900.16 Separation and Retirement Manual (MARCORSEPMAN)

1200.17_ Military Occupational Specialties Manual (MOS Manual)

1500.52_ Marine Corps Water Survival Training Program (MCWSTP)

3120.11 Marine Corps Parachuting Policy and Program Administration

3150.4 Marine Corps Diving Policy and Program Administration

3500.42_ Marine Corps Helicopter/Tiltrotor Rope Suspension Techniques (HRST) Policy and Program Administration

Technical Manuals (TMs)

10443B-12P Military Tandem Tethered Bundle

70244A-OI USMC Military Freefall Operations

Navy Publications

Navy/Marine Corps (NAVMC)

3500.55_ Reconnaissance (Recon) Training and Readiness (T&R) Manual

Navy Tactics, Techniques, and Procedures (NTTP)

3-06.1 Riverine Operations

Naval Sea Systems Command (NAVSEA)

SS521-AG-PRO-010 U.S. Navy Diving Manual

10560.2_ The Diving Equipment Authorized for Military Use (AMU) Program

13512.1_ Premeditated Personnel Parachuting (P3) Equipment Authorized for Navy Use (ANU)

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2149 Request for Information (AIntP-8)

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